Occidental Medical Times

VOLUME XV. SAN FRANCISCO, NOVEMBER, 1901. NUMBER 11.

PERINEAL PROSTATECTOMY—A NEW OPERATION.

Read before San Francisco County Medical Society, October 8, 1901.

By George Goodfellow, M. D.

The above was the title of a paper written for a meeting of the Southern California Medical Association in the year 1896.* The paper gave a resume of prostatic cases operated upon by me during five years preceding the meeting. Owing to my absence in New York, the paper was not published in the proceedings of the society, and the original is not now to be found. Urged, however, by my friend, Dr. George Chismore, of San Francisco, who has kindly supplied me with some cases upon which to demonstrate my method, I have concluded to publish the paper from notes retained at the time mentioned, adding subsequent cases.

Speaking once of the rite of circumcision, the late Professor Huxley said, with apt wit, "There is a Divinity that shapes our ends rough-hew them as we may;" and the sentiment of that modulated quotation is, to the full, as applicable to the base of the genital organ of man as to the utter extremity; for to the prostate gland, the assumed analogue of the uterus, is due a great part of the annoying, disagreeable, and painful maladies of the later life of men. It is not deemed needful herein to enter into a dissertation upon the anatomy, physiology, and pathology of this gland; for, as the intention is to confine the scope of this paper to the mechanical part of the remedial measures frequently adopted for the relief of the symptoms arising from the enlargement of the organ, such exposition seems superfluous.

Disease of the prostate is due to numerous morbific factors, any one of which may cause enlargement sufficient to obstruct the passage of the urine, so no particular method of treatment is, or ought to be, applicable to all forms; however, when decision is made that operation is required, there are several methods from which to choose, by which the prostate may be reached, the principal ones being the supra-pubic, the perineal, or a combination of the two, and more recently the method of Bottini, all giving good results. My own experience leads me to prefer the perineal method, making the combination only when circumstances demand, which, in the few cases operated, has not been found necessary. I have operated upon seventeen cases of enlarged prostate, two by the high method, and fifteen by the perineal route, all successful. The first perineal case—aside from the method adopted—presented no features of special interest. After a year or more of difficulty in emptying the bladder, total retention of urine ensued. There was neither pus, albumen, nor blood in the urine. The prostate was uniformly enlarged, weighing seven drams. Recovery was totally uneventful. This case was operated in 1891.* The second was as unfavorable a case as could have been selected for operation. Suffering for nearly six years, seeking during this time relief in every manner of treatment, and in many places, the condition when submitted to operation was a grave one. For some months preceding the date when seen by me, he had been having a daily rise of temperature of two to three degrees, and occasionally, accompanied with prolonged rigors, a temperature of 103° to 104° and over. The urine contained blood, pus, albumen, and casts. The residual amount averaged from two to four ounces, rarely falling below the latter quantity. Dysuria was extreme, urination being impossible without continued stranguric straining, and only a small quantity being voided at each effort. Emaciation within the preceding few months had been so rapid and so great that malignant disease had been and was then suspected. The prostate was found to be moderately enlarged, nodular, and fibrous, the middle lobe being an inch and a half in length. The total weight of tissue removed was between six and seven drams. Recovery was delayed somewhat by an epididymitis, but was perfect; and I had the pleasure of seeing him a few days ago in perfecthealth, nine years after operation.

---

*"Prostatectomy by Perineal Incision," by George Goodfellow, M. D., presented by I. H. Hamilton at meeting of Southern California Medical Society, December 3, 1896.

* During the week of September 29, 1891.

The third case possessed features of considerable interest, the prostatic enlargement being accompanied by an impassable but not impermeable urethra, with false channels, due probably to frequent insuccessful attempts at catheterization. The pendulous portion of the urethra was obstructed by strictures, the largest of which admitted 22 French scale; while the membranous part was impassable even to filiform instruments. Urination was frequent, scanty, and painful, so difficult, in fact, that the patient was obliged to take large drinks of whisky before the urine could be started. There was a considerable quantity of muco-pus and albumen in the urine. Rigors, with rise of temperature, were frequent. The prostate was found to be moderately increased, the nature of the neoplastic tissue being of a fibrous character, intensely hard, with disseminated nodules throughout the entire gland. Owing to the complications described, this case was more difficult than the others, but made a perfect recovery, and remained well for eighteen months or two years, when he was accidently killed. I will not go into detail with the intervening cases, save to say that they have all done well, the last one, a man seventy-six years of age, operated about two weeks ago, is now doing well.

The perineal route for extirpation of the prostate is not a difficult one, but the obstacles have been heretofore looked upon as too great to make it a successful or practicable procedure; and the high operation, being so simple and facile, has been developed to the exclusion of the others. Reginald Harrison, in his work on "Surgical Disorders of the Urinary Organs," published in 1893, reports a case of partial removal of the prostate gland through the perineal incision; but no mention is made by him of a complete operation by this method. He further reports the case of a colleague, Mr. Bickersteth, who, while operating for stone by the perineal incision, made a bilateral section of the prostate, and removed a large growth connected therewith. Both of the above patients made a good recovery, and, after a lapse of several years, were still perfectly well. After removing a stone by lithotomy in a patient eighty years of age, the late Sir William Ferguson said that he extracted the lower part of the prostate with the finger as readily as if it had been a stone. The patient not only recovered from the operation, but never showed any further signs of prostatic irritation. Mr. Cadge

THE HAHNEMANN HOSPITAL COLLEGE

has reported a case where, during a lithotomy, he removed, in the forceps between the joint of the blades, with no after complications, three masses which were found to be fibrous outgrowths of the prostate. Dr. C. Williams also mentions a case where he accidentally extirpated, between the forceps, an enlarged middle lobe of the prostate. In three weeks the patient was reported as recovered, seldom urinating more than once in the night.

The technique I use is briefly described, and is entirely original, so far as I have been able to ascertain. With the patient on the back, the thighs flexed upon the abdomen (an exaggerated Simon position), a median incision is made, the membranous urethra and bladder entered on a lithotomy staff. The finger is then introduced, pressure above the pubic bones made with the other hand, which permits the viscus to be drawn and forced as far as desired toward the external opening. The enucleation is thus made easy, and can be done very rapidly, the resulting hemorrhage amounting to almost nothing. After-treatment is simple, consisting of daily irrigations of the bladder with passage of good-sized sounds for ten days to two weeks in cases where the condition of the bladder demands such action. In uncomplicated cases, within forty-eight hours, a part of the urine will be passed per urethram, and no further treatment is called for other than the introduction of sounds until all danger of contraction is over. It will be seen that the operation just described is precisely what it purports to be: Prostatectomy through a perineal incision; and, from the results, well worthy further trial.

If, after entering the bladder, it be found—which is, of course, possible—that it is impracticable to remove the gland through the single incision, the high incision can easily be made, and the prostate extracted by the combined method. This adds little danger to the operation, for in all cases where the bladder is inflamed, the urine filled with pus, with concomitant symptoms, a perineal opening is, in my opinion, in all high cystotomies mandatory; and that opening should permit free drainage—that is to say, the urine should flow uncontrolled through the perineal incision exactly as after operations for stone. Supra-pubic drainage is disagreeable, and, I believe, dangerous alone, the incision healing slowly, the emission of urine being a source of immense discomfort to both patient and attendants, while with perineal incision alone, control of the bladder is usually regained within a moderate time, and the opening may be kept patulous without great annoyance for as long a period as desired.

The hemorrhage is always severe when the high operation is done, and not easily regulated, especially if no counter opening is made; and this fact leads me parenthetically to describe what I have found to be the most efficacious way to check such hemorrhage. Various expedients have been advised and adopted, principal of which are hot-water irrigations, the cautery, and packing with gauze or sponges within the bladder. While these measures are more or less effective, many cases arise wherein they are futile, and really contribute to continue the very trouble they are intended to obviate, or to prevent. In both of my supra-pubic cases, and in two others wherein epicystotomy was made for the removal of malignant neoplasms, the hemorrhage was severe and alarming, continuing for some hours after the operations. In these, packing within the bladder, the cautery, hot water, were all used without effect. Finally, realizing that the bladder was a contractile organ, and was prevented by the internal packing from aiding the needed hemostasis, all tampons were removed, the viscus permitted to contract, and packing applied to the outside of the bladder but within the wound. This procedure sufficed, and no further hemorrhage of moment occurred. This plan may be confidently recommended to any one who may chance to have otherwise uncontrollable hemorrhages in such operations. Per perineum the hemorrhage is virtually *nil,* and if free, controlled with great facility.

Taking all things into consideration, although my experience is limited to the cases cited, I am inclined to believe that the pure perineal operation for ablation of the prostate will be found to be the best for most if not all cases where operation is practicable.

I have not considered in detail any of the many other procedures for the removal of the obstruction, notably castration, which has been commended so highly; for, as I once said in reply to an extremely skilful surgeon who advised me to try it: "Why not remove the prostate itself? It is almost as easy, and quite as safe." That inference I am entitled to draw from the results of my operation.

An objection has been made to pure perineal prostatectomy that, unless the operator has a finger at least three and one-half inches working length, enucleation will be impossible. This is an error. My own finger is a shade under three inches of working length, and I have had not the slightest difficulty in enucleating the gland. Furthermore, the position which I have adopted, that with the thighs strongly flexed on the abdomen and thorax, and with bi-manual manipulation, the neck of the bladder can be brought to the skin of the perineum without trouble, and the entire interior of the bladder as thoroughly explored with finger or speculum as the interior of the uterus under similar circumstances. White says, for the purpose of pressing the prostate down into the perineal opening, and thus making it accessible, a preliminary supra-pubic cystotomy is required. Nicoll, quoting Von Dittel's operation, has devised and successfully practised on numerous occasions, the following operation: A special dissection is made between the rectum and urethra down to the prostate. A supra-pubic cystotomy is next performed, for the purpose of pushing into the perineal wound the obstructing hypertrophied gland. In this operation, the floor of the bladder is not open; in Alexander's, as in mine, it is. Fuller, in his late work on "Diseases of the Genito-Urinary System," advocates the combined supra-pubic and perineal method.

Since the report of my work in 1896, increased experience has more thoroughly convinced me that this operation, perineal prostatectomy, is one which will give the best results with the least danger. Owing to the advice and example of Dr. Chismore, my views as to after-treatment have been changed, especially in respect to irrigation, which I do not now do, and I find that results are as good and better than in cases where that plan is adopted. My two more recent cases, one operated eight months ago, and the other fifteen days ago, have been, so far, perfectly successful. The last mentioned is still confined to bed; but the first is in robust health, and better than he has been for the last ten years, according to his own statement, having no trouble whatever, no residual urine, and no symptoms referable to obstruction.

Although, as with all other operations, the removal of the prostate per perineum has been advocated, I am not aware that any one except myself has developed the operation in the manner in which I have, making it a thoroughly justifiable and successful procedure.

I have not discussed the Bottini method, as I see by the program that one of the members of the society will read a paper upon it. I have had no personal experience in that method; but I have only to say that wherever the Bottini method is applicable, I am perfectly positive that the method of perineal section to divide the prostate will accomplish the same results, with less trouble and risk to the patient.

Since the foregoing was written, owing to the courtesy of Dr. Bazet, I have operated another case. No complications, no trouble. Recovering rapidly.

771 Sutter Street.

PERINEAL PROSTATECTOMY.

By Professors Macios and Gonzales, of Mexico.

[Reported by Dr. Deffis, and published in the October number of the "Annals des Maladies des Organes Genito-Urinaries," Paris, 1901. Translated by Louis Baset, M. D.]

At the thirteenth International Congress of Medicine, held in Paris in the month of August of last year, in the section of "Genito-Urinary Surgery," the meetings of which were held at the Necker Hospital, under the presidency of Professor Guyon, among other operations, all very interesting, the treatment for hypertrophy of the prostate was discussed. Some surgeons considered this operation as of the future; others judged it dangerous and too uncertain in result. Dr. Deffis then took the opportunity of making known the absolutely satisfactory results obtained by Professors Ramon Macias and Regino Gonzales, by means of perineal prostatectomy, an operation which they have practiced for ten years.

When the patient suffers with a bladder very much infected, with partial or complete retention, they follow during some days the treatment extolled by M. Guyon, according to the state of the bladder. But if, after some days of rational treatment, the situation is not ameliorated, or remains stationary, they operate. The infected state of the bladder is not a contraindication for operation; on the contrary, it affords the best means of curing the patient, the only contraindication being an advanced state of renal lesions.

The operation is very simple. With the patient under anesthesia, a thorough disinfection of the bladder, the urethra, the penis, the perineum, etc., is made; a grooved catheter is introduced into the bladder, and the patient placed in proper position. The field of operation being surrounded by antiseptic compresses, the following technic is observed: A perineal incision, by a median longitudinal opening following the perineal raphe, 4 or 5 cm. in length, and having the inferior extremity encroaching a little upon the external sphincter of the anus, is made, and the urethra opened in the membranous region by an incision into the urethra, as follows: The urethrotome of Otis is introduced closed into the bladder, then with both branches drawn open, a good dilation of the prostatic urethra is secured, and the catheter is withdrawn. This done, with the nail of the index finger or with a knife, and commencing always with the lobe the least hypertrophied, the urethral mucous membrane is detached at the apex of the prostate, and through the opening is introduced either the right or the left finger, according as the right or the left lobe of the patient is operated upon; the urethral mucous membrane pushed upwards with the finger, the enucleation of the prostatic lobe commenced at the apex, is easily done; when the enucleation of the inferior extremity of the lobe is done, so that it can be felt moving in its capsule, it is seized with forceps guided by the finger, and the enucleation continued by the finger in making tractions above, below, laterally, and of circumduction. If the perineum is thick, the prostate large or friable, the enucleation of the superior part is difficult, whether because one can not get the finger there or because the prostate breaks easily under the pressure of the forceps; but with patience and repeated introduction of the forceps, always guided by the left finger, one always succeeds in making almost total extraction of the entire lobe or in fragments if the prostate is very friable. The same maneuver is repeated for the other lateral lobe and finished by the median lobe. The hemorrhage is easily controlled by tamponing for some minutes with iodoform gauze. When the hemorrhage is stopped, the large clots of blood that have fallen into the bladder are taken away, and a large, soft sound with resisting walls is introduced through the opening of the membranous urethra into the bladder to keep it from sinking under the pressure of the gauze, and is fixed in place; a copious washing of the vesical cavity with silver nitrate, 1 to 1,000, is made. The prostatic cavity is tamponed with iodoform gauze, and the superficial dressing applied. The sound is allowed to remain eight or fifteen days, according to the state of the bladder, though it is removed every forty-eight hours; after this length of time, a metallic sound is introduced through the urethra every two days. The perineal wound soon heals, and it is seldom that the urine flows by the wound after the fourth or fifth sounding.

All the patients thus operated upon, all having passed the age of fifty, have seen their urinary troubles, vesical and general, disappear. Some were even seventy years of age. The bladder, thanks to the large perineal incision, is put in complete rest; congestive accidents or inflammation diminish from day to day, the urine becomes clear, the fever, if the patient has any, disappears; the appetite comes, also, after some days, and with some patients, a veritable resurrection is accomplished.

MM. Macias and Gonzales have operated thirty patients by this process. Of these thirty patients they have lost two, one who succumbed to pneumonia some time after the operation, and the other, simply exhausted, died three or four days after the operation.

The results drawn from the operations are most encouraging, for even patients, in whom vesical contractility was almost lost, were able in a short time to urinate easily, and in only one case had the patient to use the sound after the operation, because of the lack of complete contractility.

Of the prostates thus extracted, seven have been obtained almost complete. These were presented to Professor Guyon on the part of M. Gonzales, as a mark of his respect and admiration for the founder of the school of Necker.

The innocuity of the operation and its good results are due to:—

1. The sub-capsular enucleation of the prostate from within outwards. In consequence, the operation is easy, there is no shock, there are no large vessels to fear, since they are all without.

2. The large perineal drainage prevents not only infectious accidents, but also cures, better than any other treatment, those existing before the operation. Professor Guyon has demonstrated years ago that there is nothing that disinfects better an infected bladder than its physiological suppression.

3. Attention is called to the fact that the enucleation of the prostate should

not be pushed too far upwards, some of the prostatic substance on the superior part should be left so as to respect the superior wall of the urethra, which is the surgical wall. Thus, no consequent stricture is to be feared, since the inferior wall which is destroyed shapes itself upon the sound. It is a fact that all the patients, after three, four, or five years, pass large sounds without difficulty.

4. The vesical neck should not suffer much, since no incontinence has been observed after the operation.

THE PRESIDENT'S ADDRESS.

By H. W. Taggart, M. D.

Delivered at Meeting of San Joaquin Valley Medical Association, October 8, 1901.

Taking a panoramic view of the past and present situation of the medical world and the world of medicine, there are many beautiful landscapes, the beauties of which are, in each epoch, more or less marred by clouds of obscurity, superstition, or prejudice, which have circumscribed the advancing science.

No period in the past has surpassed the present in the production of men who have made greater efforts and greater achievements in forwarding the cause of medicine—in attempting to perfect the science in its various branches.

It is not the province of this address, however, to eulogize the heroes, the distinguished of any age, neither to magnify the results of any branch, nor to unduly discriminate between the advancements of the present over the past, but to set an abridgement—a synopsis in part of past and present conditions—before the members of this association, that we may better be enabled to correctly diagnose the future, and to plan such treatment as will consummate "the possibilities of proper medical organization."

Every one who is engaged in the toils of medicine should feel it incumbent upon himself to contribute whatever of value experience and study have placed at his command, to the accomplishment of this great end; not only for his satisfaction and benefit, but for the advancement of the best interests of the profession and the whole people.

The portals of the temple of science to-day stand ajar. The way is clear, but the medical hosts approach with slow step, burdened with the knapsacks of prejudice, which must be laid aside without the walls before the army can enter and ascend the heights.

A single mind may grasp the possibilities within the reach of any great enterprise, but it requires cooperative, concentrated effort upon the part of all concerned to carry out the policy of the business and to reap a munificent harvest.

The state of California, with its abundant resources, has a great future before it. Its beautiful climate, its steady increase of population, will, in time, make it the empire state of these United States.

When there would be possibilities of a proper medical organization, could we not have laws framed to better protect the interests of our profession? Should we lie dormant when other states, even at this period, have better medical laws? As the state increases in prominence, will not proper medical organization be more needed?

Our interests will surely be benefited if all of us lend a helping hand to the building up of a proper medical organization.

The amassing of great treasure of whatever nature is the product of cooperative, concentrated energy. If there be an exception, it must be something else other than the science of medicine.

Truth must be accepted from whatever source. Concessions must be made. The pipe of peace must be smoked, and with a warm, devoted heart, directed and dedicated to this trust, the best interests of the profession and the people, the blessings consequent will be incalculable.

Every student should be taught, as a necessary part of his medical education, to believe and realize the fact that the whole fraternity has a just claim upon his professional ability and whatever of valuable experience his practice may materialize.

No man should feel that he has either the moral or professional right to ask any reputable medical college to pass upon him a degree of M. D. and clothe him with the loyal paraphernalia of a legal practitioner unless he is willing to bear his share of professional responsibilities and to do his quota of labor requisite to the best interests of the people and the science of medicine.

As members of the San Joaquin Medical Association, we then must feel that we have the duties to perform that will benefit not only our profession at large, but the laity as well.

Realizing and enjoying the blessed inheritance to-day, the product of union, we appeal to the intelligence of this association, to the profession of America, for the establishment of a grand central organization, in which the profession of the whole country shall be enlisted.

The profession thus united, what might we not expect? Legislation, national and state, with adequate appropriations, would be secured for the asking, and the medical profession would at once make the grandest strides in the world's history.

HEMATOLOGY AND ITS RELATION TO DIAGNOSIS.

By JACKSON L. MARTIN, M. D., Fresno, Cal.

Read before the San Joaquin Medical Society, Oct. 8, 1901.

The study of hematology, and its bearing upon disease, is of comparatively recent origin, and as yet it is impossible to say to what extent it may be developed and of what usefulness it may become in the practice of medicine. It is not the purpose of this paper to enter into any theoretical discussion of the subject, but simply to outline briefly what has already been accomplished along this line, and to state the extent to which the results have become beneficial to diagnosis.

The busy practitioner may feel that the time for such blood examinations can not be spared. There are laboratories, however, where such examinations can be made, but I think that not more than fifteen minutes, on an average, is required to find out all that is necessary concerning the blood; and in some five or six diseases such examinations may give us diagnoses ready made, besides throwing side-lights on a great many obscure conditions. Very often the simple discovery that the blood is normal may be a fact of great value in diagnosis. Not only as an aid to diagnosis is examination of the blood valuable, but also, occasionally, in prognosis, as, for example, in pneumonia; and hence, in it the consequent treatment may be suggested.

All are more or less familiar with the technique of various blood examinations, so I shall not enter into any elucidation of this phase of the subject. Knowing the normal constituents of the blood, variation therefrom is easily detected. The average number of red corpuscles in the male is estimated at 5,000,000, and in the female, 4,500,000 per cm.

The ratio of the white blood cells, or leucocytes, to the reds is about 1.600, making about 7,500 per cm. Of the leucocytes about 20-30 per cent are known as small lymphocytes or young cells; 4-8 per cent as large lymphocytes; 62-70 per cent as adult polymorphonuclear neutrophiles; and from ½ to 4 per cent as old eosenophiles. The hemoglobin may be increased or diminished in lines parallel to those of the red blood-corpuscles. In that case we suppose the amount of hemoglobin per corpuscle to be normal, and the color index is said to equal one. Where the hemoglobin is diminished more than the count of corpuscles, we say that the color index is less than one. It is by comparisons made with these general averages, which have been obtained by the examination of the blood of numerous normal individuals, that we are able to detect variations; the more marked the variation, the greater the significance. Not only do the number of the cells vary per se, and relatively as pertaining to numbers, but the cells themselves may undergo changes, as, for example, the degenerated condition of the blood known as poikilocytosis, in which many of the cells lose their shape, becoming irregular in outline, some larger, some smaller than normal. Then there may appear nuclei in red cells of normal size, or in cells larger or smaller than normal. Nucleated red cells are not found in the peripheral blood streams normally. The myelocyte, a very large leucocyte found in the bone marrow, is an occasional visitor of the blood in conditions on the border-land between pathological and physiological, but in one disease, leukemia, to be mentioned later, their presence in large numbers is diagnostic.

The differentiation of these various cell-structures is accomplished by means of certain stains, the most convenient, useful, and easily obtained being that known as Ehrlich's tri-acid stain.

The estimation of the number of white blood-corpuscles is probably most useful of all blood examinations. A transient increase in the number of white blood-corpuscles in the peripheral blood stream is known as leucocytosis, while the opposite condition is known as leucopenia. Physiological leucocytosis must not be confounded with pathological leucocytosis. As examples of the former may be mentioned leucocytosis of digestion, of pregnancy, after violent exercise, massage, cold baths, etc. Total abstinence from food lowers the leucocyte count, while after a hearty meal, especially one rich in proteids, the count rises about 33 per cent in sound persons. After about three hours the leucocytosis falls, and it is at about this time, with reference to the meal, that the count should be made for diagnostic purposes. Pathological leucocytosis may, for the sake of convenience, be divided into post hemorrhagic, inflammatory, toxic, leucocytosis in malignant disease, and leucocytosis due to therapeutic and experimental influences. Within a short time after a large hemorrhage we find an increase of about 18-20,000, but this increase may not remain for more than two or three days. Inflammatory leucocytoses differ in that they are of larger extent, as to duration, and show more or less characteristic differences in different diseases, purulent exudations usually having more effect on the white cells than do serous ones. There is no direct connection existing between leucocytosis and fever, as many febrile affections run their course with a normal leucocyte count; but acute, rapidly-spreading inflammations apparently produce a much greater leucocytosis than those in which the process is relatively chronic and stationary, as, for example, an appendicitis when well walled off and stationary shows less increase in white blood-cells than while its lesions are progressing. But an acute, overwhelming, general sepsis may have no effect on the leucocytes, the reactive power of the organism being crushed.

The more important inflammatory or infectious conditions in which leucocytosis appears are, scarlet fever, diphtheria, follicular tonsillitis, erysipelas, and syphilis (secondary stage), in all of which the local inflammatory process is comparatively slight. The diseases of more extensive local lesions are, pneumonia, smallpox (suppurative stage), malignant endocarditis, puerperal septicemia, and all pyemic and septicemic conditions, acute articular rheumatism, septic meningitis, and cerebro-spinal meningitis, all local inflammatory processes, such as abscesses of various kinds and situations, such as carbuncles, tonsillar and retropharyngeal abscess, appendicitis, osteomyelitis, psoas and hip abscesses, as well as abscesses of the liver, lung, spleen, etc., also pelvic peritonitis, and inflammations of the serous membranes, including pleurisy and gangrenous inflammations of the appendix, lung, bowel, and mouth.

It is of fully as great practical assistance to us to know that in certain infectious diseases leucocytosis is regularly absent, as to know those conditions in which it is to be expected. Among the most important diseases in which leucocytosis is conspicuously absent, are typhoid fever, malaria, grippe, and tuberculosis.

The pathology of the blood in certain diseases is rather interesting. Take the blood in pernicious anemia, the average red blood count is about 1,300,000, and as the drop emerges from the puncture, it is extremely pale and watery. The white cells are much diminished. If there is any change in the hemoglobin it is relatively high. The average diameter of the cells is increased, and there is a marked poikilocytosis. There are a great many nucleated red cells, known as normoblasts, and others, larger than normal, quite characteristic of the disease, called megaloblasts. In chlorosis, the red cells rarely reach as low as 2,000,000, and usually there is but little diminution in the number. There is not the marked degenerative changes, but the corpuscles themselves are very poor in hemoglobin,—a relative diminution, a quantitative and not a qualitative change. The large forms of nucleated red blood-cells, megaloblasts, are not so common as in pernicious anemia, and the average size of cells is below normal. The blood disease, leukemia, with its two forms, splenic myelogenous and lymphatic leukemia, is very interesting, especially the former variety, in which there is no great diminution of the red cells, the average being about 3,500,000 per cm. The hemoglobin is usually diminished. The striking point is the presence of numerous nucleated red cells; there may be hundreds of them seen in one cover-glass preparation, in fact they may be as numerous as in the worst forms of pernicious anemia. Both normoblasts and megaloblasts may be seen, but the last named are in the minority. As the count of the white cells rises, that of the red may fall, and vice versa. Occasionally there is a case in which the white cells are as numerous as the red. Among the white cells, the enormous numbers of myelocytes is the point of interest, the average percentage being about 38. The average total number per cu. mm. is very high, being about 440,000. I have counted myself in two cases over 600,000. About 38 per cent of these were myelocytes, therefore you can readily see what enormous quantities of these myelocytes are present. The blood of splenic myelogenous leukemia is absolutely peculiar and characteristic, and could not be confused with that of any other disease, the myelocyte being the cell upon which diagnosis hangs. There are other interesting changes in the blood which I will not take the time to speak of, as the disease is rather rare. In lymphatic leukemia there is a comparative rarity of nucleated reds, and there is always an overwhelming majority of small lymphocytes, which are characteristic of the disease. The leucocyte count is often of considerable importance to us as an aid to diagnosis in various acute infectious diseases. In some there is an increase of leucocytes, in others a diminution, and this is always true with a certain disease, unless there is some complication which may have its influence to vary the total number of leucocytes. Very early in the inception of pneumonia the leucocytes are greatly increased, and continue so throughout the febrile period. When resolution is delayed, the leucocytosis continues, sometimes for weeks. If abscesses, empyema, or gangrene follow, the leucocytes stay up. The average leucocytosis is 25,000 per cu. mm. In cases of so-called central pneumonia, in which the symptoms, but not the physical signs. of the disease are manifest, the presence of a well-marked leucocytosis is of great diagnostic value. It excludes malaria, typhoid, and uncomplicated grippe, as causes of the fever. Later, typical signs of consolidation may appear. The absence of leucocytosis in pneumonia is a very bad sign, while its presence is neither good nor bad.

In diphtheria there is also a leucocytosis, which is roughly parallel to the severity of the disease, but which has no special diagnostic value. The same holds good in scarlet fever. In typhoid fever there is an absence of any increase in the white cells, which is the most important point. They may fall during the fever to as low as one or two thousand per cubic millimeter. Most complications cause a leucocytosis. The diagnosis of typhoid is to be made by exclusion,—exclusion of other causes of fever and local inflammatory processes,—and in doing this the blood is a most powerful adjuvant, inasmuch as almost all local inflammatory processes have leucocytoses; typhoid does not. Good clinicians have been puzzled over the diagnosis between appendicitis and typhoid fever for hours, but the indication of the blood count was always fulfilled. The presence of leucocytosis in pyemic and septicemic processes makes them distinguishable from typhoid. The disease most often confounded with typhoid is malaria, but I shall refer to this later. From the moment that a case of typhoid perforates, there is a constant increase in the leucocytes, as the peritonitis spreads, and on several occasions I have had opportunity to observe this, and taking this in connection with the clinical symptoms, the diagnosis need seldom be mistaken. Appendicitis is accompanied by a leucocytosis. The total absence of leucocytosis in a case not obviously mild, is a very bad prognostic sign, as in pneumonia and diphtheria. An increasing leucocytosis means a spreading process, and may be the only evidence of the fact. It is very significant, and should be regarded as a bad sign. After the abscess has ceased to spread and has become well walled off, the leucocyte count remains stationary or decreases. The blood gives us no clue in differentiating between appendicitis and pus tube, abscess, or pelvic peritonitis. Abscesses of various kinds, as felon, gumboil, vulvar or parotid abscesses, etc., however small, raise the leucocyte count. A felon containing no more than one-half dram of pus may raise the leucocyte count as high as 20,000. Serous pleurisy, while causing a leucocytosis of from 12,000 to 20,000, does not affect the blood as purulent effusions do, and the non-tubular cases affect the blood count very little, if any. In meningitis leucocytosis is usually well marked. Tubercular meningitis can be distinguished from the purulent forms by the absence of leucocytosis in the tubercular cases. Meningitis is the only intracranial disease (except abscesses) which shows leucocytosis, and the fact may be of great help in excluding other causes of coma. Some cases of typhoid, when seen for the first time and without a history of the prevailing illness, may be difficult to distinguish from meningitis, but typhoid never has a leucocytosis, if uncomplicated, and meningitis always has. In pure tuberculosis, the striking fact is the absence of changes in both red and white corpuscles. So long as the infection remains unmixed, the white cells are not increased. Cavities are very constantly accompanied by leucocytosis, and the absence of leucocytosis in any case proves the absence of any cavity of considerable size. In malaria the leucocytes are usually subnormal. As the disease progresses, each paroxysm lessens the number of red corpuscles, and the hemoglobin is diminished proportionately. But more important than these facts in the study of malarial blood is the presence of the plasmodium malariæ, a parasite inhabiting and existing upon the red blood-cells. It is often difficult to detect, and requires an experienced observer. The best time to examine for the parasite is not, as many suppose, at the time of the chill, because at that time many of the organisms forsake the periphereal blood stream, and enter the internal organs. The best time to make the examination is about eight hours before, or after, the paroxysm, and the blood preparation must not be too thick, neither must one always be satisfied with only a few minutes of research. We often hear reports of fruitless research for the parasites in the blood of malarial patients, but the regularity with which they are found at all the larger hospitals and by all practical observers in this and other countries leaves no doubt that they are to be found in every case during some portion of the cycle. Suffice it to say that finding the organism very often puts the mind of the practitioner at ease when otherwise it would be filled with doubt. There are several varieties of organisms, but I shall not go into their differentiation.

I have not taken the time to enter into detail in the discussion of the disease that I have mentioned, neither will I stop to speak of some other diseases, the blood of which has more or less significance as a diagnostic feature. There seems reason to believe that the study of the blood is still in its infancy, and will take a high place in the future as an aid to diagnosis, prognosis, and treatment.

THE MANAGEMENT OF MISCARRIAGE AND ABORTION.

By W. W. Cross, Visalia.

Read before the San Joaquin Valley Medical Society, October 8, 1901.

My object in bringing this subject before you is to see what your experience leads you to say the treatment should be. The many patients, the subjects of tubular ovarian, and chronic uterine trouble, that come under observation, in which we may trace the trouble to, or at least date it from, a miscarriage, certainly indicate that a treatment is not usually followed that brings satisfactory results.

The cases of abortion and miscarriage as we meet them may, for convenience of discussion, be divided:—

1. Those we may check. In these cases we find a little hemorrhage, and by putting the patient to bed, administering a little opium and viburnum, quiet the uterus, and the patient goes on to full term, or perhaps miscarries later during the pregnancy.

2. Those we can not stop. Under this head we include all those cases in which the miscarriage is complete, and no further treatment is necessary. Also those in which any odor develops, which shows decomposition, or those in which the contractions of the uterus are strong enough to start considerable hemorrhage.

3. Those we see late in the trouble, in which a portion or all of the contents of the uterus still remain, and in which we find offensive masses of tissue which so often lead to a fatal termination.

Thus divided I believe we can place any case we meet, and our experience leads us to propose the following plan of management:

If we see that the case is bound to end the pregnancy, we proceed according to symptoms, as follows: If there is hemorrhage and we can not empty the uterus, due to a rigid os, and there are no signs of decomposition, we disinfect the vagina, give a hot intra-uterine douche of some antiseptic solution, and pack the vagina tightly with iodoform gauze and cotton. This enables us to feel reasonably safe that the hemorrhage will stop, and on our next visit we are often gratified to find the os well dilated and the contents of the uterus upon the tampon. On examination we often find the uterus empty and the walls smooth inside. After washing out the cavity and vagina, we find that no other treatment is necessary locally. Sometimes the tampon must be renewed for a day or two, but if any odor develops, we advise curettement at once. If there is still retained membrane and tissue in the uterus, which we can not remove by washing, we advise curettement. On the other hand, if when called to the case we find evidence of decomposition, we advise at once that the patient be curetted. In those cases where we are called in late, where there is a great deal of foul-smelling material in the uterus, or most of the contents of the uterus has been expelled and we find a putrid discharge, we consider there is no choice but to curette at once. By curettement we do not mean that a portion of the contents of the uterus is removed, but we mean that the uterus is emptied entirely and the surface left in such a condition that no trouble can result. The method we practice is as follows (we describe it not because we claim anything original or special for it, but because it has yielded good results in our practice): We generally get the kitchen table in a room where we can have a fire, and cover the table with a quilt. The room is warmed, and the best light obtainable is secured. The patient is placed on the table, and a clover crutch adjusted, the hips of the patient brought down well over the edge of the table in the pad, and the anesthetic commenced. The external genitals are scrubbed with soap, water, and a brush, and the vagina is disinfected. We now introduce the Ediboh! speculum, and hold it in place by a five-pound lard bucket half full of water. This dilates the vagina and gives us a good chance to work. The cervix is now seized with a strong pair of vulsellum forceps and the dilator introduced. When we have good dilation we wash all the loose tissue from the uterus. For the adherent pieces of tissue, we use the Thomas fibroid curette, medium size. This instrument is large, and while rough will not cut, and its size we think prevents us from perforating the wall of the uterus easily. Two or three sweeps around the circumference of the cavity of the uterus will in most cases detach all adherent tissues, and they can easily be removed with the Green's placental curette or any of the other blunt curettes made something on the style of the Simon's. After we think all has been removed from the uterus, we pass the finger into the cavity and satisfy ourselves that it is clear, and if we find necessary, renew our former efforts until everything has been removed. When this is done, we wash the uterus as clean as we can and dry the cavity with sterile gauze. The vagina and uterine cavity being dry, we place a small piece of dry cotton behind the cervix to prevent burning with the acid, and wipe the cavity of the uterus with a piece of cotton which has been saturated with pure carbolic acid. The uterus is again washed and dried, and a piece of iodoform gauze two inches wide packed in the cavity of the uterus for drainage. A cotton pad is placed over the mouth of the vagina to absorb the drainage, and the patient dried and placed in bed. The same evening we often give three grains of calomel and soda, also three grains of quinine every four hours and a dram of ergot and water every six hours. The latter two are kept up for three days. The uterus is irrigated and packed every day if we think necessary from the odor and the character of the discharge. Afterwards it is no longer necessary to pack the uterus, and we have a nurse in charge upon whom we can depend; we have her give the vaginal douche for a day or two. In our cases handled in this way we have had good results. None of the patients treated in this way have had trouble; by that we mean those that were dangerously ill; the proper course had not been pursued when they fell into our hands, and in no way could the trouble be laid to our method of management. None of our patients have had chronic uterine, tubular, or ovarian trouble after this method of treatment. Some women, who are given to the so-called habit of miscarriage, have had less trouble in that way after a thorough curettement. In some cases in which the patient had poor health, the result of several miscarriages, their health has been very much improved by the thorough curettement. Another point we wish to emphasize is that we never use a sharp curette in the treatment of these cases. We do not wish to be understood to say that trouble under our treatment can always be avoided, but such a course as we have outlined has rendered results so excellent that we feel that to advocate such measures is not at all unwarranted. We also feel that we have saved the lives of several patients by the timely and judicious use of the curette.

SOME SURGICAL ADJUNCTS.

By E. Harbert, M. D., Stockton, California.

Read before the San Joaquin Valley Medical Society, October 8, 1901.

In beginning the review of the subject "Some Surgical Adjuncts," I will ask you for the moment to go back only a few years to an earlier date of our surgical knowledge, and note through the progress of time the most important adjuncts which have been the means of bringing about our present degree of skill in this science. And I assure you in the beginning, that it is not the object of this paper to discuss everything that has been of interest to and aided in the evolution of this important branch of medicine, but to note only those which to me seem most worthy of our consideration, and discuss some one of more recent advent. If I should ask of this convention to name the two most beneficial aids in advancing the science of surgery, I have not the least doubt but the echo would be, "Anesthesia and antisepsis."

Surgery, until 1846, about the time of the discovery of anesthetics, was practiced more as an art than as a science, and often fell into disrepute, owing to the crude methods and barbarous procedures that were in vogue at the time. But when Morton gave us a practical demonstration of sulphuric ether anesthesia, he not only gave to the world one of its greatest blessings, but furnished the means by which surgery has grown to its present state of perfection. Closely following Morton's investigation, we have Simpson with the chloroform, and Kohler with cocain. As to the relative merits of the three great anesthetics, it is not my purpose to discuss, but it is an historical fact that ether, first introduced, holds its popularity in the majority of the surgical world to-day. Relative to cocain and its possibilities, I dare not, at this time, predict. There has been no time in the past when the subject of cocain analgesia was more discussed and investigated than it is to-day. That it has encroached upon the field of the older anesthetics there can be no denying. Its new field in the application to the spinal centers is something in the line of progress of modern thought and practical application. That spinal analgesia is a fixture, that there is and ever will be a class of cases in which its administration will be practicable, there is no question. That it can be administered and appropriately so in all cases I sincerely doubt. Its administration in obstetrics is less opposed than was chloroform at the time of its introduction into this field, but I predict that it will take time and experimentation to determine the expediency of the routine practice of spinal analgesia in labor, and that it will be some time ere the happy medium is obtained that will give to it its proper sphere as one of our great pain relievers; but as much as we are indebted to anesthesia, we are no less to antisepsis.

In less than half a century past we have had a complete change in surgery, and in treating surgical diseases. This change was due to the introduction of antisepsis, it being based upon the new germ theory of the origin of disease, which refers in general to the zymotic or infectious diseases, such as typhoid, puerperal fever, tetanus, and erysipelas. Less than thirty years ago the mortality from these diseases in civil hospitals, as well as in private practice, was something terrible, and during epidemics of these diseases the surgeons of that day were loath to perform operations, especially on the viscera, as the results were almost invariably fatal. But, owing to the investigations and researches of such men as Tyndal, Pasteur, Koch, and Lister, we have a condition of affairs existing to-day that puts our celiotomies in the list of minor procedures with a mortality next to nil, and robs typhoid and puerperal fever, erysipelas, and kindred affections of their horrors. Since establishing the germ theory, the primary principles have remained the same, while the means employed in treating septic diseases have undergone varied and wonderful changes. To discuss—or so much as mention—all of these agencies would be an imposition upon your time and a repetition of that with which you are already familiar. But the object of my coming before you to-day is to tell you something of the practical application of one of the oldest and most commonly-used antiseptics of the now extensive list. It is carbolic acid. What I have to say in regard to the application of this agent is, perhaps, not new to the majority here present, but if I should succeed in interesting a small minority I shall feel amply repaid for my effort. Since the time of Lister, and perhaps at an earlier date, carbolic acid was used both externally and internally in zymotic diseases. It was used to check vomiting, in diarrhea, typhoid fever, scarlatina, diphtheria, as well as in many other kindred affections, such as cholera morbus and diabetes of hepatic origin. Weak solutions, two per cent and under, have been injected subcutaneously for abscess, and thrown into the joints in synovitis. The pure acid has been injected in cases of hydrocele, notwithstanding gangrene and sloughing usually followed its administration. Its external application covers a much larger field, and it is now commonly used by the profession for washing wounds, disinfecting hands, as a local anesthetic in small and superficial operations. But, notwithstanding its wide field of application, it is a powerful, destructive agent, and if not properly handled, like a mighty engine turned loose, it is capable of, and ofttimes does, great injury. The germicidal qualities of carbolic acid have long been known, but, owing to the lack of some agent for the controlling of its necrotic tendencies, its usefulness has been greatly circumscribed, until not long since, through a discovery of Seneca D. Powell, of New York, it was demonstrated that alcohol thoroughly controlled this action, and thereby gave the world a specific in the treatment of erysipelas, a specific in treating abscess, conditions of all descriptions, including suppurative hip-joint disease, suppurative mastoid disease, and all caries of bone wherever found. In my celiotomies, when I have infection to contend with, I do not hesitate to apply pure carbolic acid, and as yet I have had no cause for regret. Out of these cases involving suppurative appendicitis, necrosis of cellular and intestinal tissue, pus tubes, and ovaries, cancer, etc., I have never had a complication or a bad symptom arise from its use, thus I am almost invariably enabled to close my abdominal incision, doing away with the necessity of drainage; this I consider an advance in surgical technic, and I venture to predict that there is a time not far distant when a wisp of cheese-cloth left in the abdomen by "up-to-date" operators will be as rare as a snowstorm in the San Joaquin Valley.

The antidotal effects of alcohol to pure carbolic acid were admirably demonstrated not long since in a case of acute carbolic-acid poisoning, taken into the stomach with suicidal intent. I arrived upon the scene early, and with stomach tube, a bottle of fifty per cent alcohol, and plenty of water I soon had the patient "coming my way." This is only one of three cases of this kind treated in the same way with similar results. Of course the success of the treatment largely depends upon the early administration of alcohol. I have seen in the Post-Graduate Hospital, New York, extensive suppurative hip-joint disease treated by exposing the cavity, removing all necrosed bone and tissue, then filling it with pure carbolic acid, allowing it to remain for one minute, then washing out with alcohol, followed with five per cent carbolic solution. The wound was then packed with gauze. Cures were generally effected in this way, from six to ten a week, while by the former method they were practically incurable. In these cases I have seen a temperature of 104° recede to 99° in six hours after treatment. In erysipelas I have never seen a remedy act more as a specific. It will abort or cure any case in from six to ten hours, that is, provided the infected area is accessible to the remedy. Gentlemen, I know of no other agent that will accomplish **as much.**

THE CARDIO-VASCULAR SYSTEM IN DIABETES.

By G. E. Ebright, M. D., Assistant to the Chair of Clinical Medicine, Medical Department, University of California.

Read before the San Francisco County Medical Society, September 9, 1901.

The following case of diabetes mellitus with an abnormal pulse may serve to introduce the subject.

Mr. M., age 48, married, born in Ireland, an undertaker by occupation. The patient complained of having been rejected by a life insurance company on account of the rapid rate of his pulse. He has never been ill, except that his physician discovered sugar in his urine at the age of sixteen. This has been intermittent, and he explained its not being discovered by the insurance examiner by the fact that he could cause its disappearance by a careful diet. He claims to have always had a rapid pulse, even as a boy. There is no history of severe athletic exercise except horseback riding, with broken ribs and clavicles as a consequence. He uses strong tea and coffee, and smokes five or more cigars a day. No alcohol. Appetite good but not ravenous. He drinks a large amount of water, and passes a large quantity of urine. Upon examination he is rather corpulent. The left ventricle of the heart is slightly enlarged, the left margin extending to the left mammary line and the apex displaced downward. The cardiac sounds normal except marked accentuation of the second aortic. Pulses equal, regular, rapid, 102 per minute, medium volume, high tension, slight thickening of the radial arteries. Spleen and liver normal. There is probably chronic interstitial nephritis, judging from the pulse and the elimination of only 150 grains of urea a day. No albuminuria was discovered in two examinations. No cerebral or nervous symptoms. On subsequent examinations the pulse rate was found to vary beatween 102 and 118. On account of the chance of the rapidity being due to the stimulants he habitually took, he was advised to stop the cigars and tea and coffee, which he did in large measure, and was given fifteen grains of potassium bromide three times a day. The diet was restricted. Five weeks have shown no improvement. Both the rapid pulse and the glycosuria have persisted.

Whether there is any connection between the sugar and the tachycardia is difficult to determine. There is undoubtedly a nervous abnormality of long standing, possibly congenital, underlying the heart condition, which may or may not be related to the glycosuria. It is not uncommon to find diabetes in markedly neurotic persons.

With reference to the cardio-vascular system in diabetes mellitus, it may be admitted that, although most cases are easily diagnosed by the urinalysis, some do arise in which the more or less constant changes in the vascular apparatus may have diagnostic importance, and in all cases the consideration of this system is necessary, since it may be the seat of changes, sometimes slight, sometimes serious enough to terminate the life of the patient.

Considering the blood: It is usually normal in appearance, and the only characteristic feature is the increased amount of sugar, sometimes as much as 0.57 per cent as against 0.05 per cent in normal blood. The alkalinity is said to be much diminished, especially during coma. It is argued that beta-oxybutyric acid and its derivatives, diacetic acid and acetone, by uniting with the alkalies of the blood thereby diminish the amount of carbon dioxide that the blood is capable of carrying and cause a coma due to the toxic effects of carbon dioxide. This diabetic coma is similar to the coma produced in animals when toxic doses of the mineral acids are administered. Fat is frequently increased in the blood, and may be of such quantity as to cause a milky appearance of the fluid, and on standing rise as a definite fatty layer to the top. As a rule this can not be seen, but the microscope may reveal a greatly increased number of minute particles with Brownian movement, in the plasma, resembling bacteria. They will stain with osmic acid or with Sudan III. Sometimes they stain poorly or not at all.

The red corpuscles may be broken down into a granular material, and glycogen has been demonstrated in them. The number of red cells per cm. is diminished at first because sugar in the blood draws water from the tissues into the vessels, thereby diluting the blood. Increased diuresis soon frees the blood from an excess of sugar and water, and so causes concentration. Thus the blood counts will differ within wide limits. Myelocytes are found in small percentages, but are not constant. They are possibly due to the same cause from which they appear in carbon dioxide poisoning. Of the leucocytes it may be said that the only feature is a large digestive leucocytosis, even without fasting.

In the heart: Pericarditis occurs sometimes. Myocarditis may be due to gout, arteriosclerosis, obesity, or to a combination of them. The myocardium is often pale and soft, often hypertrophied, and sometimes distinctly fatty, or showing fibroid degeneration. In advanced cases marked fatty degeneration of the muscle is the characteristic condition, and glycogen granules may be found between the muscular bundles. Endocarditis with coincident changes in the valves is a rare complication. The valves affected are usually the mitral, rarely the aortic. With the cardiac condition may be associated dyspnea or faintness, or angina pectoris or sudden death. Diet does not improve the angina nor the dyspnea, but the advance of the diabetes makes the asthma worse. Moreover, the angina or the asthma may precede or follow the presence of the glycosuria.

The pulse is extremely interesting, and the relation that diabetes bears to its rate and tension is important, but unfortunately has not yet been determined with satisfactory certainty. It is known from physiological experiment that the injection of sugar into the blood raises the tension in the veins but not in the arteries. In the early course of the disease the arterial pressure is apt to be high, later becoming small and feeble. It is self-evident that complications in the heart will disturb the condition of the pulse. A rapid pulse, without a definite cardiac source, is among the early signs of the approach of coma. In the arteries fat emboli have been described in the pulmonary and other large trunks. The concensus of opinion now is that this is a post-mortem condition due to the running together of fat droplets. It probably never occurs before death, and so is not a cause of gangrene. The vessels themselves present most important changes which are of vital interest to the patient. The principal one is arteriosclerosis, and upon it rests the others. It is no doubt chiefly due to the presence of sugar, perhaps partly to the other products of disordered metabolism, as beta-oxybutyric acid or its derivatives, but these are not constantly present, and their significance is obscured in the nebula of theory. Arteriosclerosis is seen in long-standing, mild cases, especially those of a gouty habit. It does not occur in young persons in whom the disease is of short duration. Moreover, if the sugar is not constant in the urine, the vessels seem to suffer less. In the patient with transient glycosuria, now forty-eight years old, in whom the sugar was first noticed at the age of sixteen, there is only a slight fibrosis of the radial vessels. In the train of these arterial changes follow a number of important secondary conditions. In the brain may occur apoplexies or cerebral softening. There may be transient hemiplegia, monoplegia, or aphasia, or vertigo of a simple form or associated with slow pulse and syncopal or epileptiform attacks. The condition of the vessels and kidneys is liable to account for the failure of the heart and the attacks of asthma and angina pectoris. Diabetic gangrene is due to arteriosclerosis or to nerve changes, the former being the most potent cause. Of twenty-six cases of gangrene in diabetics during eleven years in St. Thomas' Hospital examination of the arteries of twenty-four revealed atheroma in twenty-three. Intimately associated with the sclerosis of the vessels are the changes in the liver, pancreas, and kidneys. There are seen in these organs in severe cases deposits of iron pigment about the vessels, due to the destruction of the red blood-corpuscles. This hemochromatosis is assigned as a cause of cirrhosis of the liver and pancreas resulting in diabetes. Cirrhosis, either of the atrophic or hypertrophic type, is particularly apt to occur in those cases in which there is passive congestion from cardiac failure. On account of such changes in the liver and pancreas, atheroma has been called a cause of diabetes. A bronzing of the skin occurring in this malady, as a result of the destruction of the red blood-cells, has been described by French writers. An interesting case in this connection was reported by Opie, in which he found bronzing of the skin and pigmentation of the liver, pancreas, heart, and other viscera, with cirrhosis of the liver and chronic interstitial pancreatitis.

In conclusion it may be stated that the subjects of arteriosclerosis should be viewed as possible victims of diabetes, especially if they present any of the usual symptoms of the disease. In the event of failing to discover sugar in the urine, thirty grams of glucose may be administered. Failing then to obtain a temporary glycosuria, we may feel content that there is little likelihood of being subjected to the humiliation of having some more fortunate observer arrive at a proper diagnosis, which, in an intermission, a single test had failed to reveal.

BIBLIOGRAPHY.

Naunyn, "Diabetes."
Opie, "Jour. Exp. Med.," May-July, 1899.
A. Mathieu & L. Larrier, "Gaz. des Hop.," 1899, No. 129.
Allbutt, "System of Med.," vol. 3.
Stewart, "Manual of Physiol."

W. Sternberg, "Zeit f. klin. Med.," B. XXXVIII., H. 1, 2, u. 3.
Cabot, "Clin. Ex. of the Blood."
T. B. Fuchter, "Jour. Am. Med. Assoc.," Oct. 21, 1899.
C. S. Wallace, "Lancet," Dec. 23, 1899.
"Am. Year Book of Med.," Gould, 1901,

590 Sutter St.

PALLIATIVE TREATMENT OF CHRONIC PROSTATIC HYPERTROPHY.

Read before San Francisco County Medical Society, October 8, 1901.

By JOHN C. SPENCER, M. D., Chief of Genito-Urinary Clinic, Out-patient Department, Medical Department, University of California.

The palliative treatment of chronic prostatic hypertrophy resolves itself into general, medicinal, and mechanical.

Under the head of general treatment may be included all that pertains to a maintenance of the best possible physical condition of the patient. Briefly, this means the avoidance of physical over-exertion or mental worry; of sudden changes in temperature, notably exposure to sudden chill, whether local or general. Individuals with an enlarged gland and a relatively small amount of residual urine, who may have had no unusual symptoms previously, may suddenly develop a partial or complete ischuria as a result of a wetting, or of even getting the feet wet. Further, gastronomic excesses of all kinds, likewise the use of alcohol or certain articles of food, notably certain fruits and vegetables, especially muskmelons, are to be avoided. I have found by experience that the latter fruit seems to add an irritating quality to the urine, in addition to increasing its amount, and causing temporary phosphaturia. Then, too, sexual excesses are put under the ban, because of the concomitant congestion of the gland. The bladder should never be allowed to become overdistended with urine. It were wiser for the individual to set an alarm-clock at night, that he may be awakened at a period about four or five hours from the time of retirement, in order to empty his bladder.

Under the head of drugs, there is no one remedy which seems to exert any especial influence upon the size of the enlarged gland. In considering the age at which the enlargement occurs, one must take into account that a certain degree of arterio-sclerosis may be present. As a placebo, both for the patient and for our own consciences, the iodides in some form may be given, or possibly ergot.

Under the head of mechanical treatment there are comparatively few resources of a strictly non-operative nature at our command. By way of classification, my experience has been that those whose prostates are hypertrophied, and with a very small amount of residual urine present, the bladder being clean, require no treatment whatever. They should be made to understand clearly all the possibilities, however, and hence maintain their health at the most uniform level.

For another class, suffering from occasional ischuria, partial or complete, with 100 grains or more of residual urine, catheterization must be resorted to from once up to four or five times daily, according to the requirements of the case. Such a bladder must be kept well emptied to avoid fermentive changes and the deposit of phosphates and carbonates and possible calculus formation.

My experience has been that a man of ordinary intelligence may be instructed in the few details requisite for the maintenance of cleanliness, so that the danger of infecting a clean bladder may be avoided indefinitely. This would involve instructions as to the minutest details; the washing of hands; the preservation of the catheter in a four per cent solution of boric acid; the avoidance of contact of the catheter with anything but the fingers and the urethra. From my friend, Dr. Chismore, I learned the little bit of wisdom that the ordinary red rubber catheter, boiled in a four per cent solution of boric acid and preserved in the same when not in use, may be kept for a very long time. The surface retains its smoothness, and does not develop the minute cracks which tend to harbor possible sources of infection. If, because of the tortuousness of the prostatic urethra, a stiffer instrument is required, then its preservation should be maintained in an atmosphere of formaldehyde gas. All these refinements of detail seem to make us a laughing-stock in the face of certain tough old customers, whose bladders have acquired such a degree of tolerance that the good, old-styled gum-elastic catheter with the punched eye and stilette, is carried in the inside pocket and lubricated with saliva pro re nata. However, I think most of us would prefer to use a reasonable degree of cleanliness and not take chances on developing or discovering an individual naturally immune to the effects of bladder infection.

It may be possible to effect a slight reduction in the size of the gland by judicious massage. My experience has been that by feeling one's way, as to the degree of pressure tolerated, one may eventually come to use quite a firm pressure, thus promoting a quicker emptying of the veins of the gland, and favoring a more active metabolism of the gland parenchyma. If we have to deal with a gland in whose ducts and acini there is a catarrh added to the hypertrophy, my experience has been that vigorous massage is a decided advantage in most cases. In patients in whom this latter condition exists, and in whom, for some reason, no operation is to be performed, I find that the accumulation of altered prostatic secretion, in the form of a thick, gelatinous mucus, collects in the prostatic sinus, distending it and causing these patients an unusual degree of local discomfort. This shows itself by a tenesmus so urgent that frequently it is not possible for them to reach the urinal before there is a discharge of this thick, tenacious mucus on the clothing, with perhaps little or no urine. The feeling of irritation may or may not be relieved momentarily by this discharge. Such cases I have found to be greatly benefited by a periodical course of vigorous massage of the gland, thus forcing out through the duct the overplus of altered secretion, and relieving the condition for a much longer time than as though left to itself. Such patients are much depressed mentally, even when told that it is not semen which is thus passing off. The moral effect of the massage in such cases is no inconsiderable one.

Another procedure which sometimes gives relief from the ischuria due to lateral encroachment of the gland on the urethral caliber, is a judicious dilatation of the vesical neck with an Oberlander-Kollmann dilator. With cocain or eucain, or other narcotics, this may be carried with safety to a caliber of 44 or 45 French. The only accident, if it may be termed so, which might accompany such dilation, would be a slight divulsion of the mucosa at the vesical neck. This in itself would be of little importance, unless by chance there might be a varicocity of the vessels at that point. Then one might expect a little bleeding.

The majority of cases, however, come to us with infected bladders. There is more or less catarrh, with fermentation and the presence of phosphates and carbonates. This catarrh is prone to extend by continuity from the bladder mucosa to the mucosa of the prostatic urethra. Such patients are, as a rule, greatly distressed by the pain, and annoyed mentally and physically by the frequent urination and tenesmus.

Cleanliness is the keynote of the management of such cases. The bladder and prostatic urethra should be well irrigated with a four per cent solution of boric acid, or with Thiersch's solution, in cases in which the infection is most pronounced, at least once, possibly twice a day, the patient being kept off his feet as much as possible. When the mucopus is found to be considerably diminished, the condition may be greatly benefited by the instillation of an Ultzmann syringeful of silver nitrate solution from one-half per cent up to two per cent in strength, or even a little stronger, according to the tolerance of the individual. The bowels should be kept in a liquid condition by the judicious administration of salines. The attempt should be made to assist the sterilization of the urine a tergo, by the use of urotropin or cystogen or salol. If the urine remains persistently alkaline, it may be necessary to acidify it with benzoic acid.

In the matter of irrigation, such a bladder should not be further irritated by overdistention or even by an unusual degree of distention. Not more than 150 grams of the irrigating fluid should be allowed to run in at one time.

If tenesmus should become very distressing at any time, rather than fly immediately to opium, it would be preferable to resort to a hot sitz-bath. Let the patient get into the water at a barely tolerable degree of heat, then much hotter water may be allowed to run in without discomfort. The effect is very soothing, and will sometimes relieve the patient for a relatively long period. Better than the sitz-bath, however, in my hands, has been the use of the rectal douche, with very hot water or normal salt solution. Since the introduction to the profession of a certain form of glass irrigation tube of his own devising, by Chetwood, of New York, I have discarded the older and unsatisfactory forms, and used this one with the greatest satisfaction. I have the patient supply himself with such a tube, made with the exit perforations all directed anteriorly, thus directing the stream of hot water toward the gland and insuring a ready return flow. The relief from the use of this form of rectal irrigation is sometimes remarkable. As a last resort some opium derivative, perferably codein, in the form of a suppository, may be used to give the patient relief. The intelligent patients, in whom symptoms accompanying the catarrh are not very urgent, may be instructed to watch their own condition, and attend to the toilet of their bladder personally, with occasional visits to the medical man's office for inspection. Ignorant patients in the humbler walks of life should be confined in a hospital ward, where their condition may receive intelligent care and attention.

It is apt to be the case that a long continuance of prostatic hypertrophy and its concomitant symptoms, begets a greater or less degree of neurasthenia. One of the curious features accompanying this later condition at times, is an excessive secretion of urine of low specific gravity, which goes hand in hand with frequent urination and more or less tenesmus and annoyance, the urine being acid in reaction. I have had such patients tell me that whenever the urine became higher colored, and, ipso facto, denser and somewhat more acid, the frequency of urination diminishes, and they feel much more comfortable. I have frequently failed to relieve this condition, only modifying it by the use of atropin to check the excessive secretion of urine. It is only by the most painstaking attention to these and many other details individual to each case, that we may be able to make life tolerable to such prostatics as are denied relief through some radical operation.

Occidental Medical Times

Communications are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author. Published monthly.

OFFICE OF PUBLICATION, : : : 1121 SUTTER STREET, SAN FRANCISCO.

THE REPORT OF THE SPECIAL HEALTH COMMISSIONERS RESPECTING THE ALLEGED EXISTENCE OF BUBONIC PLAGUE IN CALIFORNIA.

The report of the special health commissioners, appointed by the governor of California, adds another humiliating chapter to the already too long drawn out discussion of the existence of bubonic plague in this state. It is not proposed to enter into any detail in refutation of this bold, defiant, and stupid document. A review of the columns of the OCCIDENTAL MEDICAL TIMES since April, 1900, fully answers the falseness of this rehash. Two references, however, may not be out of place to urge upon the attention the very plausible fact that this effort of Gage's Commission virtually admits the truth. The first is taken from a telegram to Secretary Gage from the governor, where, though under duress and after much circumlocution, he concludes:—

"I therefore respectfully request the United States authorities to take charge of the matter within this state and deal with the situation *from the standpoint of the report of its commissioners,* but without cost or charge to this state, at the same time assuring you of my hearty cooperation."—*Appendix, p. 30.*

The second is the report of Dr. S. M. Mouser, which, with due apology to the bacteriologist, is published in full to disclose his knowledge of the subject and his reliability in the presentation of facts. It reads thus:—

To the Honorable State Board of Health of the State of California:

The undersigned begs to report that, at the request of your honorable Board, he has made a thorough bacteriological investigation of three Japanese women who died at 845 Washington Street, and has arrived at the conclusion hereinafter stated:—

"These women were named, respectively, Miss Moiyo (No. 63 of autopsies made since April 4 by medical men connected with the U. S. Marine Hospital Service), Miss Saina (No. 64), and Miss M. Kawamura (No. 68). These women were all inmates of a house of prostitution, and were similarly situated as to their habits and mode of life. The post mortem appearances were in many respects similar, except that in case 68 there were marked evidences of syphilis, copper-colored spots appearing on the skin of nearly all parts of the body. There was in each case some enlargement of the inguino-femoral glands, but in no case was the gland broken down or in a state of suppuration. There were no marked changes in the axillary or cervical glands.

"In cases 64 and 68 there was a little enlargement of some of the mesenteric glands. In each case the spleen was somewhat enlarged and friable. In all three cases were found short, rather thick micro-organisms, staining more deeply at the ends than in the middle. Guinea-pigs inoculated with portions of tissue from these dead bodies invariably died in a few days, with every evidence of septicemia hemorrhagica. In all these cases the organisms were obtained in pure culture and inoculated into half-grown guinea-pigs, not one of which died nor showed evidence of disease. While the organism found in these cases resembles somewhat that of plague, it equally resembles so many other bacteria that we should hesitate to pronounce on it from its morphology alone. For instance, chicken cholera, swine plague, the plague of deer and other wild animals, septicemia hemorrhagica, etc.

"Where the greatest bacteriologists in the world differ in opinion on the identity of the organisms above named, should we not hesitate to pronounce hastily and positively by the morphology alone, without taking into consideration the clinical aspect of these cases and all other evidence that can be obtained? Returning to the morphology of the organism found in the cases, it will be proper for the writer to state that he has, while investigating these cases, found an organism identical with the one found in the dead subject in every particular. Not only in its morphology, but the culture and reactions are the same throughout. This was obtained in some water from a small lake which was being examined. Since, in examining some urine, he found what is morphologically its prototype. From this last it was convenient to obtain cultures.

"Clinically we have no evidence of the existence of plague. In the first place, there has been no unusual amount of sickness in the Chinese quarter or in the city. Secondly, with the exception of the three cases under consideration, and perhaps two others, there have not been two cases of suspects found in one house, nor in the immediate vicinity. This has not been the case in other places where plague has prevailed.

"In view of all the facts he has been able to gather, he does not hesitate to say he is satisfied that the above mentioned were all cases of septicemia hemorrhagica, and not bubonic plague.

"Case 69, a Chinese girl fifty days old, was submitted to the undersigned for investigation, but as the micro-organism above described was not found, no further investigation was made.

"Respectfully submitted,
"S. M. Mouser, M. D.
"San Francisco, August, 1901."

Notwithstanding this very marked demonstration of scientific erudition and of general accuracy, we desire to inform him that the following cases occurred in the same houses: 26, 29, 30, at 814 Washington Street; 19, 20, at 802 Dupont Street; 13, 17, at 767 Clay Street; 36, 37, 38, 39, at 845 Washington Street; 9, 33, at 740 Pacific Street, and respectfully invite his attention to an editorial entitled "A Bacteriological Resume of the San Francisco Plague," published in the OCCIDENTAL MEDICAL TIMES for August, 1900.

It seems superfluous to tell the reader that this lucid exposition of supposed facts is quite sufficient ~~in~~ itself to convince any thinking man of the truth it attempts to deny. It is contradictory throughout, and bears openly on its face the imprint of desperation and despair. A sense of distrust and suggestion of falsehood scents every page, and permeates every sentence. It maintains the position, insisted on at all times by this journal, that every effort was made to suppress the report, for no plan was conceded to except on this condition. It pointedly shows that Dr. Wyman and the Marine Hospital Service were to be blamed, and sacrificed in order to uphold the falsehood; that this Commission were the instruments of the removal of Drs. Kinyoun and J. H. White;* that the State Board of Health are the dupes of the Governor, and have sacrificed their name and honor in a base cause. The prominence of its personalities discloses the weakness of its argument. Its aspersions, when referring to certain individuals, are characteristic of all the fairness that has emanated from these same brains. The fact that an appeal must be made to newspaper men and a bacteriologist, comparatively unknown even to his own community, sufficiently demonstrates how hard pressed was his excellency for support. Its severity towards the Marine Hospital Service breathes a spirit of bad faith and the utmost ingratitude for a leniency, that would not have been shown had the head of the service realized the manner of men with whom he was to deal. It defies the Treasury Department and blatantly hurls the lie into its very teeth. It disdains to more than mention the fact that this Department's Commission ever made a report; and if so, that Simon Flexner, J. H. Novy, and Wyllis F. Barker connived to defraud this state by deliberate and malicious false reports. Its editorial authors claim for themselves the ability to discuss and diagnose diseases of which they are scientifically and pathetically ignorant. They must be passed by in most serious contempt as selfish, consummate bigots, of whom nothing more need be said than has been published in these pages.

The portion of this brilliant travesty on truth and science, which appeals most to the profession, is that assented to by the medical men composing the State

---

*Appendix, pages 33, 34.

Board. They have subscribed to a report that is false. They have quoted a number of cases that were never reported to them or to any one else to be cases of plague. They have borne false testimony against their brethren and the name of medicine. They have consented to the findings of a bacteriologist, who, through ignorance or greed, denies facts proven beyond controversy and condemns indirectly the value of scientific knowledge throughout the world. They have recorded the fact that the chicken cholera bacillus, the bacillus of swine plague, the bacillus of hemorrhagic septicemia, the colon bacillus, is pathogenic to man. They should be made to prove that "the form of a bacteriologist," Dr. Ryfkogel on being called into consultation, "at once pronounced the case bubonic plague" and "then made the puncture above mentioned to confirm his diagnosis," and that "smears made from these glands showed the bipolar stained organism only to be present in the set of glands on the right side where puncture had been made," and "it should be added here that smears were made from this exudate of lungs from the heart's blood, and from the mesenteric glands, but none of these smears showed bipolar stained organisms; this proving clearly that the organisms found in the right group of inguinal femoral glands were not found in blood of subject," inferring a criminality on the part of Dr. Ryfkogel, that it is the sworn and solemn duty of this very same board on the behalf of the people of the great state of California to sift to the utmost limits of justice and right. To such stupidity and ignorance the guardians of our health have affixed their signatures in violation of their oath of office and the solemn obligations of their calling, using a position of honor and trust for purposes too ignominious for further consideration.

MORE PLAGUE.

Since our last issue two cases of plague have been found, both Chinamen; one, Chin Chow, at 624 Jackson Street, still living; the other, Tong Shing, Waverly Place, dead. In our next issue will be published the post-mortem results of all cases occurring since August 31.

THE TWELFTH SESSION OF THE SAN JOAQUIN VALLEY MEDICAL SOCIETY.

The twelfth semiannual session of this prosperous and vigorously-growing medical society was held in Stockton, in Miller Memorial Hall, Tuesday, Oct. 8, 1901. The attendance was large, the discussions spirited, and the papers excellent. About fifty of the leading physicians of this beautiful valley were in attendance, and, as is usual, the utmost harmony prevailed. Dr. J. D. Dameron, of Stockton, president of the San Joaquin County Medical Society, delivered the address of welcome. Following this earnest welcome to their city, the president of the San Joaquin Valley Medical Society, Dr. H. W. Taggart, of Stockton, delivered his opening address. The banquet tendered by the local county society was a fitting ending to a day of physical and mental pleasure and profit. The menu left little to be desired, and that little was supplied by Fisher R. Clarke, M. D., the clever toast-master, and the gentlemen who so ably and fittingly responded.

This meeting, in attendance, in interest, and in kindly professional hospitality, was one long to be remembered. The next session will be held in Fresno on the second Tuesday in March, 1902. The officers for the ensuing term are as follows: President, Henry Hildreth, Delano; first vice-president, B. F. Sur-

rhyne, M. D., Modesto; second vice-president, J. L. Carson, M. D., Bakersfield; third vice-president, J. B. Rosson, M. D., Tulare; secretary, W. S. Flower, M. D., Bakersfield; assistant secretary, D. H. Trowbridge, M. D., Fresno; treasurer, T. M. Hayden, M. D., Fresno.

SOCIETY PROCEEDINGS.

CALIFORNIA ACADEMY OF MEDICINE.

September 23, 1901.

SARCOMA OF THE ORBIT.

The president, Dr. D. W. Montgomery, in the chair.

Dr. H. Morrow: This man came into the clinic and wanted to have a nodule on his forehead cut out. It was diagnosed as sarcoma, and I brought him here to get your opinion as to the best method of treatment. I believe if it is cut out one eye must go. I would like to see if any one will suggest anything else, such as an injection with Coley's fluid, Fowler's solution, etc.; or perhaps there will be a difference of opinion as to diagnosis. It began two years ago as a nodule on the skin, and was diagnosed in Georgia as cancer, and a quack there put on a paste, and it stayed away until two months ago, and then began to spread, until now it is at the inner canthus of the left eye.

Dr. G. Caglieri: I think it can be removed all right. I do not think it goes into the orbit at all. There is no need to sacrifice the eye, but possibly a part of the upper lid.

Dr. H. M. Sherman: I never treated a tumor of that character in that particular location, but, so far as the removal of this tumor is concerned, it does not seem to me to be so difficult, as all the masses are movable, and if one restricted one's work to such tissue as tumor mass, I think all can be gotten out. How deep they grow, I have no idea. It is quite likely we would find more than we expected. As to the mass over the inner canthus, it is adherent to the bone, and would be more difficult to manage. Whether it would result in any particular benefit is another question. If the tumor proves to be a spindle cell sarcoma, Coley's fluid might be used. Coley has lately published a paper which cites a number of cases where satisfactory microscopical diagnoses were made, and under the use of the fluid the tumors disappeared.. We can not shrug our shoulders at a paper of that kind. Wyeth states that an incision made for the removal of the tumor should be bathed in the fluid. I think it is best to remove these masses, and if some are found inside of the frontal sinus, they still would be accessible, and then the Coley's fluid could be used afterwards.

Dr. Ryfkogel: I have watched three cases where Coley's fluid was used, but none of them were spindle-cell sarcomas. I think it is desirable to use it for the prevention of recurrence.

Dr. Morrow: It is not a typical sarcoma, but probably a fibro sarcoma. I would like to ask if we should remove the whole thing or shell each lobe out separately.

DUPUYTREN'S CONTRACTURE.

Dr. Dudley Tait presented photographs of a case of Dupuytren's contraction, showing involvement of all the fingers of both hands and a slight retraction of the plantar fasciae. The latter feature was present in two other cases seen by Dr. Tait, and seemed to throw some light on the etiology of the disease, in excluding traumatism, for example, as an etiological factor. The diversity of opinion regarding treatment of this disease may be partly explained by the existence of three distinct forms or stages of the lesions; in the first the fascia alone is involved; in the second, the skin and fascia; in the third, the joints, in addition to the overlying soft parts. In the advanced cases the Adams' operation (first used by Sir Astley Cooper) is seldom successful, and at best requires a long and painful after-treatment. While abroad recently, Dr. Tait questioned numerous surgeons upon this subject, and found them almost unanimously in favor of radical treatment,—excision, followed by grafting. In the early stages massage and hygienic treatment will give surprisingly good results. Dr. Tait is inclined to the belief that Dupuytren's contraction should be returned to the medical domain, from which it had been taken without good reason by surgeons.

Dr. E. E. Kelly: I saw the operation of dissecting all the palmar fascia by Gaul, of London, but I did not get to see the result of it. He took all the skin off, and dissected everything, and took out the palmar fascia down to the very limits.

Dr. Tait: I would simply suggest, inasmuch as surgeons generally invade the medical domain, that it might seem proper to review the ground and give some of the material back. Dupuytren's contraction should go to the medical side in the primary stage, and massage treatment is sufficient.

GASTROSTOMY.

Dr. Tait exhibited specimens from a case of gastrostomy for carcinoma of the oesophagus. The method employed was that of Poirier, a very simple and safe procedure, requiring only ten minutes for its completion under local anesthesia. For over six months the patient was able to take food, solid and liquid, by mouth. He lived thirteen and one-half months. Dr. Tait spoke of having used six different methods. In his opinion, the valvular procedures were superior to the oblique methods. The orifice in the stomach must be small, and the tube should only be introduced at time of feeding. Local anesthesia was a distinct advantage. The spontaneous dilation of the oesophageal stricture after gastrostomy recalls the effects of colostomy in cases of rectal carcinoma. Gastrostomy patients should be kept in bed the shortest time possible, two or three days at the utmost. Willy Meyer, of New York, whose experience in gastrostomy is perhaps larger than that of any other American surgeon, reports a case having lived eleven and one-half months; the majority of the others died after a much shorter period. Dr. Tait's case died thirteen and one-half months after operation.

Dr. Caglieri: I do not think Dr. Gross mentioned any advantage of this method, and I think one could find objections to it. The doctor said the injections produce pain. They certainly do. I think it always produces some pain, and sometimes violent pain. Six weeks ago a man came to me suffering from marked syphilitic manifestations. He had left the army on that account. He had been to a physician in this town, whom he left, as he could not stand the intramuscular injections, they were so painful. Perhaps, from a therapeutic point of view, it may do as much good as other injections, but the patients object to it, and once in a while we get an abscess, or a hard lump, or a thing that makes you think you will have an abscess. In regard to the efficiency, it is good; but other methods are just as good, and not so painful. First of all you get syphilitics, to whom you can give mercury by mouth, but in most patients I prefer to give the injections, and the intravenous injections are the best. It is more soothing than the intramuscular, and not so much after-care is required. Some object because it is hard to get into the vein. My experience is that we can easily get into the vein. My method is the usual method, with a little variation. I make them hold the arm down for a long time, and, after that, with the arm in that position, take a rubber tube and put it above the bend of the elbow, and do not put it on too tightly, as the vein will not come out; so the first trick is in not putting the rubber band on too tightly, and after that have him hold the arm up, and then take another rubber tube or catheter below the elbow, and clamp it, and push it up; this makes the vein swell up. A third thing is a short needle. The needle is not more than one-fourth inch long. One may often catch the vein, but go through it instead of going right into it. For that reason I use the short needle. It is very easy, and you feel when you are in the vein. The next point in this is to know when you get into the vein. Insert the needle, and inject one or two drops before taking the band off; and if it is not in the vein, the patient will tell you that it burns; and if it burns, take the needle out, and do it over again. If it does not, inject whole contents. There are a great many men who say it must be painful; but it does not hurt at all, and it is remarkable the amount you can inject and not get constitutional symptoms. I give one per cent cyanide mercury for ten days, and increase to two per cent solution, and have the solution made up in small quantities. I think it has the advantage over the other methods, and it is remarkable how much you can inject into the blood stream without symptoms of mercurialization. I can not conceive why we should use the intramuscular injections.

Dr. Montgomery: I have had a little experience with calomel injections, but what little I have had convinced me that bichlorid gives not near the pain that calomel does. I remember one fellow who had one of these scleroses of the tongue, and on whom I used calomel. On about the second day, in every instance, he was struck in the back as if kicked, and after that the pain was a crucifixion. I do not think, unless under very grave circumstances, and when the thing is ungovernable, I would use calomel. With bichlorid the pain will go down in a short time; but it is not such fearful pain as the other. As Dr. Caglieri said, I would not use it in an ordinary case of syphilis. We can get along with inunctions, and then with internal treatment. I have never used the cyanide or salicylate of mercury.

SAN FRANCISCO SOCIETY OF EYE, EAR, NOSE, AND THROAT SURGEONS.

September 11, 1901.

Dr. T. B. Eaton, the president, in the chair.

RETINAL DETACHMENT.

Dr. Merritt presented a case of complete retinal detachment, which came on suddenly twelve years ago, and has persisted unchanged ever since. In this case there was no etiological factor obtainable.

In the discussion Dr. Payne spoke of the therapeutic value of subconjunctival injections of normal salt solution, and stated that he had tried an injection of 10 to 12 minims in one case, but that the resultant pain was so great that he did not repeat the experiment.

Dr. Southard spoke of his method of giving subconjunctival injections, which consisted in directing the point of the needle well outward after introducing it under the conjunctiva, thus avoiding the pain and danger of infecting the capsule of Tenon. Dr. Southard also gave a brief history of a case of retinal detachment which he had observed in a business man some fifteen years ago. In this case the detachment had come on without any previous illness of traumo, and had remained stationary, both as to extent and as to vision, for fifteen years.

Replying to a question from Dr. Eaton, Dr. Merritt stated that he did not know the refraction of the patient in the case just demonstrated.

TOXIC AMBLYOPIA.

Dr. Payne then demonstrated two cases of toxic amblyopia. The first case gave a history of going to bed perfectly well, and of awaking in the morning almost entirely blind, being able to see moving objects only. Two or three days later even this small amount of vision left him, so that he could not distinguish light from darkness. Three weeks later, when first seen by Dr. Payne, he was again beginning to see objects. The veins of the fundus were a trifle full, the arteries somewhat narrowed, the margins of the papillae somewhat hazy, the temporal halves of the discs taking on a glistening white appearance, the nasal halves retaining a pinkish appearance. Blindness was almost absolute in the nasal halves of the fields, the temporal halves possessing perception of moving objects. The patient has always been perfectly well, and there was no evidence of specific disease, diabetes, hemorrhage, nor of the taking of any drug which might produce the sudden amblyopia. His occupation of bookbinder did not expose him to any toxic influence, nor did it demand very keen vision. The patient had taken a moderate amount of alcohol for years, five or six drinks of whisky a day, and had chewed two or three small plugs of medium strong tobacco a week, all of which was not excessive, yet it was the only cause to be found for the amblyopia. It is probable that his field was narrowed gradually, or that he had developed scotomata previous to this attack, and that the suddenness of the attack was apparent only. The second case was one of blindness from drinking wood alcohol. A large quantity, said to be a pint, was drunk with suicidal intent. The patient was unconscious for four days, and, on recovering, was absolutely blind, with widely-dilated pupils. When seen ten days later, he had absolutely no perception of light, his pupils were widely dilated, right papilla a trifle hazy and uniformly milky white, both veins and arteries a trifle narrowed; no other changes in the fundus. The left papilla exhibited practically the same changes, only not quite so far advanced. The patient has now been under treatment three or four weeks; the papillae are becoming whiter, and there is absolutely no light perception in either eye.

Something like twelve cases of wood-alcohol amblyopia have been reported. The clinical changes generally noted are swelling of the nerve head, and similar changes in the retina. Friedenwald, of Baltimore, reported at the meeting of the American Medical Association, at St. Paul, the results of feeding wood alcohol to rabbits for a number of weeks or months, in order to produce chronic poisoning. In all the rabbits he found a degeneration of the ganglion cells of the retina and a disappearance of the chromatic substance, so that it is believed these toxic agents produce blindness, by acting as a direct poison on the ganglion cells, and not by producing anemia. It is also believed that the degenerative changes take place in the retina before the toxemia is sufficient to produce a swollen nerve head. The first clinical symptom, however, is that of the swollen nerve head. In this connection a number of cases had been produced by drinking Jamaica ginger, Florida water, etc., for the wood alcohol which these preparations contain. Hale, of Chicago, reports a case of toxic amblyopia in a cooper, in whom the inhalation of the wood alcohol used to dissolve the shellac, and produced a severe amblyopia, with all the characteristic changes in the fundus. The more sudden its onset, and the more complete the amblyopia, the less favorable the prognosis. Assuming this to be correct, the prognosis of the second case, where wood alcohol was the toxic agent, is very bad, while that of the first, where the toxic agent was not definitely defined, is more favorable, as we may infer that the amblyopia was coming on for some time before the patient discovered it.

Dr. Deane asked whether the cord reflexes had been examined.

Dr. Martin thought that the prognosis in both cases was extremely bad, and indorsed Dr. Payne's opinion as to the gradual onset of the amblyopia in the first case.

Dr. Southard held it unnecessary to assume any toxic agent in the first case, and reported a case in which the central vision remained good while the concentric narrowing of the fields progressed until total blindness ensued. In this case no tobacco nor alcohol had been used, and the patient was a picture of health. At no time was there any swelling of the nerve head, and the reflexes were always normal.

Dr. Eaton was of the opinion that the changes in the fundus in the first case were possibly due to a distension of Swalbe's (subarachnoid) space, giving rise to edema of the nerve and retina, and consequent atrophy from compression. This conjecture seemed to be borne out by the blur in the left eye, and the appearance of edema in the macular region. A number of men who had inhaled Columbia spirits had complained of temporary obscuration of vision. In these cases the loss of vision is intermittent.

Dr. Merritt stated that the whiteness of the discs in the first case was much more pronounced than when he saw the case two weeks ago.

Dr. Payne closed the discussion by stating that the reflexes in both cases were normal, and by enumerating some of the many agents which may produce toxic amblyopia.

Dr. Eaton recalled the case which he presented to this society on February 21st of this year, in which a crystal of methylene blue and a 20 per cent solution of protargol had been applied to an infected ulcer of the cornea, leaving a dense, bluish-green deposit on the cornea. This deposit has now entirely disappeared, and the vision has risen to 20-10.

SAN JOAQUIN VALLEY MEDICAL ASSOCIATION.

Regular Semiannual Meeting, Stockton, October 8, 1901.

The president, Dr. C. F. Taggart, occupied the chair (whose address is published on page 391).

Dr. J. D. Dameron, of Stockton, delivered an address of welcome in behalf of the citizens of Stockton and the San Joaquin County Medical Society.

HEMATOLOGY; ITS RELATION TO DIAGNOSIS.

J. L. Martin, M. D., Fresno, read a paper entitled "Hematology; Its Relation to Diagnosis." (Published on page 392.)

Dr. W. W. Cross, Visalia: I find the study of the blood of particular interest and of special advantage in malaria and typhoid. Very frequently we find them coexisting, though clinically one may be more pronounced than the other. In many cases in our part of the country we find a high-grade anemia; these patients suffer no paroxysms, but still, with the microscope, we are able to discover plasmodia. I should like to ask the speaker what is the reason for the leucocytosis. In many cases the blood cells seem to have knots on the sides; and I am not referring to a crenated cell.

Dr. J. L. Martin: There are various theories advanced in explanation of leucocytosis, some claiming that it is due to certain products let loose in the process of disease. In some fevers it is said to be due to vasomotor disturbances; the capillaries being contracted and the blood consequently concentrated, the number of leucocytes is increased. In this condition, however, the number of white cells would be increased, simply owing to the concentration of the vital fluid, and not to a true increase in the number of the cells. So far no definite causes for leucocytosis have been given.

Dr. W. N. Sherman, Fresno: Generally the leucocytes are denominated the scavengers of the blood; it is said to be their province to destroy poisons and harmful bacteria circulating in the blood,—a conservative process. I believe the time is coming when the microscope and hemoglobinometer will be employed with frequency by every physician. Some little skill is requisite in the use of these instruments, but one can become familiar with the technic quickly. There is a tendency in all diseases for the corpuscles to assume an oval form, as is seen in some fowls, and the shape of the corpuscles can be detected readily. Pathologically there is a meaning for all these disturbances in size, shape, number, and relative proportion of the corpuscles, which can be interpreted with care and practice.

Dr. A. T. Hudson, Stockton: I am induced to speak with reference to this paper on leucocythemia, a disease itself rare and incurable. Over 30 years ago I saw my first and only case of this peculiar malady. The patient was a young man, healthy and vigorous, until the time of this attack. He remained in good flesh, had no temperature, but was anemic; and thus he lived along for about six years. On post mortem we found few abnormalities, except that all the cavities of the body were sealed solid with fat, as though it had been poured in in liquid form, and had there congealed.

Dr. G. A. Hare: One point that impresses me is that leucocytosis is of itself a common occurrence of no significance, except that it is indicative of a reparative process going on with vigor. When the blood is loaded with the detritus of some diseased condition, leucocytosis is marked; when from a wound or injury repair tissue is necessary, we find a local leucocytosis.

Dr. Martin: The question of the cause of leucocytosis has been considered for years. If due to toxins, it should be found in malaria and typhoid fever, but such is not the case except in the latter stages of these diseases.

MISCARRIAGE AND THE CURETTE.

W. W. Gross, M. D., Visalia, read a paper entitled "The Management of Miscarriage and the Use of the Curette."

Dr. B. F. Surrhyne, Modesto: There can be no doubt about the importance of this subject, the condition, and the treatment. It will not do to institute the same treatment in all cases alike, without regard to the conditions to be met. There are some where the expectant treatment should be used, some where the vagina should be packed, and some where more active treatment must be employed. The most important feature is the diagnosis, whether the miscarriage is complete or incomplete. There should be a thorough study of the fetus and membranes, so as to be able to tell when it is complete. If digital examination shows that it is incomplete, something must be done. Some authors say that no curette should be used, that the finger is far safer, and will meet all the requirements. I make it a point to use my finger when it is possible to empty the uterus; but it will not meet all cases. Whether the curette or finger be used, it should be done under strict asepsis. A question of importance is the method to be used. When early, about six weeks, if sepsis is present, active steps must be taken; the uterus must be emptied; and in most of these cases the result will be satisfactory.

Dr. H. Hildreth, Delano: Usually there seems to me to be no need to interfere. The curette is a foreign body, and should not be introduced, and I rarely employ anything except a soft wire loop, made as needed. I think that often cotton on a stick would do just as well.

Dr. G. A. Hare, Fresno: It is my practice usually in these cases to use iodoform gauze as a firm pack in both uterus and vagina, after the former has been emptied, as an absorbent and a mechanical stimulant of vigorous contraction. I have always had a fear of using a finger, as no man can sterilize his finger thoroughly, while instruments can be completely sterilized by boiling.

Dr. Chas. R. Harry, Stockton: I should like to ask the writer in regard to his treatment in two or three varieties of cases. When pelvic peritonitis has already set in, when she has temperature and a diffuse pelvic peritonitis, in these two cases what would you do? Also when a patient is having a hemorrhage, and has had daily for weeks, when she is about four and one-half months pregnant, and it is not a placenta previa, would you wait, or would you dilate and remove? As to the use of quinin, I would not use it after curettage, as you can not tell then whether the quinin keeps the temperature down or the curette has removed the cause. The finger can not be used in some of these cases at about six weeks, as the os is tightly contracted. The size of the curette to be used depends upon the size of the uterus; sometimes it will be found impossible to clear the uterus with the dull curette.

Dr. N. P. Duncan, Hanford: My method generally is, when the contents have been expelled to the cervix, to take the tissues, and, twisting them, gradually remove them completely. I then irrigate the uterus and pack with dry boric acid, and the vagina also. I believe this to be the method when feasible, and consider the dry boric acid the best mild antiseptic we can use.

Dr. T. Purdon, Turlock: You will find many of these cases not requiring anesthesia. I call them cases of minor sepsis. The blunt curette should be used, the uterus washed out, and the temperature watched. If the temperature comes down and remains down, the case is progressing satisfactorily. Of course, there is some slight pain attendant upon this procedure without an anesthetic, but it is well to try it rather than to add the additional danger of a general anesthetic.

Dr. A. B. Cowan, Fresno: With regard to the point made by Dr. Harry in cases with fever and pelvic peritonitis, where the uterus is soft and flabby, I believe it is best to never use the curette, for where the uterine wall is friable, perforation is very likely to occur, no matter how gentle the manipulation and how great the care used.

Dr. W. W. Cross, Visalia: I am a firm adherent to the use of carbolic acid to swab out the uterus, as it cleanses it thoroughly. In those cases of pelvic peritonitis mentioned by Dr Harry, most of them die from sepsis. It behooves us to remove the cause of the peritonitis, and thus if possible to limit further infection. However, none of us can be certain as to what has gone on in the pelvis or abdomen. In the cases mentioned by Dr. Harry, where there is hemorrhage, I think the paper covered the question fully; where little or nothing has passed, they should be put to bed, and if it still comes on, the pregnancy should be terminated. I consider the judicious use of the curette is warranted.

SOME SURGICAL ADJUNCTS.

Dr. E. Harbert read a paper on "Some Surgical Adjuncts." (Published on page 398.)

Dr. H. Hildreth, Delano: I have been called upon to discuss this paper, but I have had no experience with carbolic acid surgically. We have known for a quarter of a century that it is a powerful and efficient disinfectant and antiseptic; but so far as my use of it goes, I have not considered it superior to other preparations.

Dr. D. H. Trowbridge, Fresno: In recent years I have not used carbolic acid, except as an application to lupus of the nose, etc. The use of alcohol after the application of the carbolic acid has greatly enhanced the effect of the former, especially in old indolent ulcers and in those of a tuberculous nature.

Dr. R. O. P. Phillips, Kingsburg: I have been familiar with carbolic acid for over twenty years, but am entirely unacquainted with its use in the treatment of erysipelas.

Dr. J. D. Dameron, Stockton: In reply to Dr. Phillips, as to the use of carbolic acid and alcohol in the treatment of erysipelas, I would say that it is extremely simple and remarkably efficient. I first cleanse the part affected, unless it be about the eyes, nose, etc., where it is not safe to use it, apply the carbolic acid pure, leaving it on until the surface shows the white color of the beginning eschar, generally about a minute. Then apply alcohol, dry, and a dry dressing. In reply to Dr. Dunn, who asks if there is no constitutional treatment, I would say that it is considered purely a local disturbance, and so far no other treatment has been necessary in the ten cases in which I have employed it, and in all of which it was successful.

Dr. J. E. Purdon, Turlock: In my service in India, in 1868, we used it externally, and even internally, as we were out of quinin. We saw no ill effects from its use, but achieved results of value. Of its surgical advantages we have been fully aware. In 1874 I employed it diluted in the treatment of abscess of the liver in two cases, one having to be operated on twice. Its use with alcohol was then unknown. I have used it all the time since, and so far have seen no harm result from its use.

Dr. Harbert, Stockton: Dr. Powell, of New York City, has been using alcohol after carbolic acid for about twenty years. In erysipelas this is the only remedy to use, no constitutional treatment being necessary. This method will cure serious cases, say with a temperature of 104, reducing it to normal in six hours. A second application is rarely necessary. The secret of the use of carbolic acid is the employment of alcohol afterwards. In this way there are no bad effects, and it leaves no scar.

COCAIN ANESTHESIA.

Dr. A. W. Morton, of San Francisco, who was in attendance at the meeting, was called upon by the president, and said in part: I consider it an honor and a privilege to be called upon to address this scientific body. I am surprised and pleased to see such a full attendance and so much interest in the matters brought before you. Antiseptics date back to Pasteur, who evolved and presented to the world the theory of fermentation and putrefaction, and showed that the causes of these were wafted about in the air. He himself did not apply this theory surgically, and the credit for this is given to Lister. It has always been so; the microscopist and laboratory worker, who have by research, study, and experimentation demonstrated some epoch-making discovery, are not given due credit, while some other, who applies their discovery practically, receives the reward. Dr. Morton was not accorded the credit for the discovery of his anesthetic, which did so much to alleviate human suffering and render possible the marvelous strides of modern surgery, and in consequence died broken-hearted. The same thing is seen to-day with regard to cocain analgesia. I am a believer in the use of cocain as an anesthetic by subarachnoid injection. I have been using it in my clinical work until my cases number about 500, 40 or 50 of these being operations on the upper extremities. No one method is absolutely perfect, and in small doses the use of cocain will not prove altogether perfect. It is well in the employment of cocain by this method to keep the attention, especially in children, directed from the operation, or they may give some trouble because of their fright, though they do not feel pain. It certainly seems that the medical profession generally does not appreciate or realize the vast possibilities of this method of anesthesia, and the marvelous aid for the relief of pain that has been placed in our hands. Spinal anesthesia has been and is now used more on this coast than in any other section of the country. Corning, about 1888, first employed this method, but, like many other things originating at home, it was forgotten until a later period, when it was taken up by Bier, and later still by Tuffier, who about a year ago reported at the International Medical Congress over 100 cases. Since then it has been used the world over. At first it was claimed that it would not produce anesthesia above the diaphragm; but in our work we have been able, by directing the point of the needle a little upward, and by injecting the cocain solution as quickly as possible, to produce anesthesia of the head and face, so that enucleation of the eye and the removal of a large lipoma from the neck have been done with no pain whatever to the patient. This afternoon at St. Joseph's Home we shall have an enucleation of an eye under spinal anesthesia, and you are invited to be present to witness the demonstration. I wish to thank you for the honor and for the kindly courtesy which you have evinced by your close attention.

HYDROTHERAPEUTICS.

Dr. G. A. Hare, Fresno, presented a paper, "Hydrotherapeutics."

Dr. N. P. Duncan, Hanford: Those of you who have stood in a scant and nebulous bathing suit by the chill water of the natatorium, or, in nature's robe of sunlight, and with a smile, have stood on the bank of some pool, will appreciate my feeling as I approach the discussion of this subject. Dr. Hare handles hydrotherapeutics as if water were his native element. We must all recognize that there is much of truth in the principles he has advocated, that heat and cold are great factors in nature, and they should be employed when indicated. Water is the most convenient and most effective mode of employing it. In fever cases, when the temperature ranges as high as 105 degrees or 106 degrees, and the patient seems liable to collapse, the application of cold or in some instances hot water will effect speedy relief. Recently I had three cases of scarlet fever; one succumbed, though cold water was employed; the next patient was treated with cold sheets, with good effect; this, and stimulants, two teaspoonfuls of whisky every two hours, with liquid diet, constituted the treatment.

Dr. W. E. Lilley, Merced: I have been treating scarlet fever for some time, and have had several cases recently. In these last cases I made use of cold applications, but the temperature ranged higher than before. I then used hot packs, and these were successful in reducing the temperature, and all the patients recovered.

Dr. W. N. Sherman, Fresno: Hydrotherapeutics is of use in a number of classes of cases; cold applications to the body in malnutrition and nervous conditions are admirable. If you give internal treatment in this class of cases and in anemics, and combine it with a cold bath each morning, you can make them fat, strong, and vigorous. The time should be short, not longer than two or three minutes from the plunge until dressed. Much more care should be exercised in the use of the hot bath, and physicians should discriminate carefully in the cases where they prescribe or recommend the hot bath, and the heart should be carefully examined; the bath also should be of shortest duration. The speaker called attention to the advantages of hot water over the epigastrium, but from my own experience I can say that I do not consider it so good as water internally at a temperature of about 110 degrees.

Dr. J. E. Purdon, Turlock: The vasomotor system is the key to the situation, and the heart should be considered. Brandt did more to popularize the treatment of continuous fevers with cold-water baths than any other individual, and really placed this method on a sound scientific basis. I employ this treatment very much, generally beginning with the bath at 85 degrees, gradually reducing its temperature, until the patient's fever has been reduced about three degrees. It is a mistake to put a patient who is exhausted into a bath and reduce his temperature while in the bath to normal, for the temperature will continue to fall one or two degrees after removal from the bath. Cases should be judged on their merits, and so treated.

Dr. R. O. P. Phillips, Kingsburg: Doctors should be good men with good judgment. Hot or cold water should be applied when needed, neither the one or the other being used in a routine way, or employed indiscriminately.

Dr. H. Hildreth, Delano: I had expected an irresistible flood from Dr. Hare, but he modified his ideas to such a degree that he has almost converted me to the use of a certain amount of water. In Kentucky I was always instructed that it would not do to take water to drink, but it must be diluted at least one-half with good whisky. Hot water is better than a flat-iron, for it retains the heat longer and can be obtained in a more pliable form, and in some complaints it is superior to a mustard plaster. Hydrotherapeutics enters into the practice of all who practice medicine, but it is not a cure for every diseased condition.

Dr. Hare, Fresno: Hot water is the best cooling agent, cold the best heating agent. In cases with high temperature, even as high as 106 degrees and 108 degrees, when collapse is imminent, the use of hot water is indicated, as it is the quickest physiological agent to bring the blood to the surface. If you use cold water, you shock the patient, and drive what little remaining blood there is on the surface to the large internal vessels. and increase the condition that you wish to avert. The primary effect of cold is to cool the body; afterward the temperature rises; on the other hand, the primary effect of heat is to heat the body, while afterward the temperature falls.

SOME THOUGHTS ON ANESTHESIA.

Dr. E. C. Dunn, Fresno, presented a paper on "Some Thoughts on Anesthesia," confining himself to a consideration of general anesthesia with chloroform or ether or their mixtures. After calling attention to the comparative characteristics of chloroform and ether, their relative safety in administration, and the manner in which death occurs in each, the writer gave the varying proportions of the drugs used in the common mixtures for anesthetic purposes. He prefers the A. C. E. mixture, and outlined his method of procedure. He precedes the administration of the anesthetic with morphin one-fourth grain, nitroglycerin one one-hundredth grain, atropin one one-hundredth grain, combined in one tablet. A. C. E. mixture is then given slowly and carefully in all cases, except where ether or chloroform alone are positively indicated. He closed with a quotation favorable to mixed anesthesia, from Reeves, as follows: "(1) Emotional excitement, always distressing, sometimes dangerous, very much lessened, if not abolished; (2) anesthesia produced more rapidly, and with much smaller quantity of the agent; (3) the period of excitement is moderated and shortened (with hard drinkers an important point); (4) vomiting believed to be less frequent and severe; (5) absolute quiet of the patient secured, a point of great value in delicate operations (Bernard says in the dog the lingual artery can be tied at its point of emergence, under mixed anesthesia, an operation which can not be performed under either morphin or chloroform alone; (6) the stage of recovery is quieter, with greater freedom from pain." In a practice of over twenty years he has given anesthetics under almost all circumstances possible, and with this technic has not yet lost a case from the administration of the anesthetic.

Dr. C. W. Evans, Modesto: I have not used the A. C. E. mixture, but have always preferred chloroform, except where, from weakness, or from some other good reason, ether is indicated. In my experience I employ the drop method, and like it best. It seems to me that respiration stops first, the heart continuing to beat for some little time afterward. As to the use of cocain by subarachnoid injection, I have had no experience. I know it has proven objectionable when used locally or injected. It appears to me that this use of cocain is still in the experimental stage. I believe that carelessness is often the cause of danger; the breathing should be watched in chloroform anesthesia, and so far we have lost no cases.

Dr. H. Hildreth, Delano: Gentlemen: I live in the country, where it is almost impossible to secure an anesthetist; consequently I am usually the one to give my own anesthetic and to perform my own operations. I have tried the mixtures of the various anesthetics, and have tried them straight, and so far I have had no case that resulted disastrously, though occasionally nearly so. I have employed chloroform where the patients have had all kinds of pulses; in one instance chloroform was administered safely where the patient died six weeks after from fatty degeneration of the heart. Fear of chloroform, it seems to me, is generally exaggerated. My method is to give two or three drams of good liquor, either brandy or whisky, but no morphin, then administer chloroform, allowing a free admixture of air. Following this plan there have been no cases of syncope, except with hysterical females. It takes a long time to produce anesthesia with A. C. E. method. And where one has no help, I consider chloroform the best anesthetic.

Dr. J. H. Trowbridge, Fresno: I can readily appreciate the reason advanced by Dr. Hildreth for his preference for chloroform, but statistics bear me out in the fact that chloroform is one of the most dangerous, if not the most dangerous, anesthetics, and that ether is not so dangerous. It is a further fact that in New York they will administer chloroform only after a consultation. Ether, to be properly given, should have the air excluded, and it is a rare thing to see it given properly. It is a very easy matter to prepare a cone with a towel, a newspaper, and a few pins. I have often put a patient under the anesthetic in five minutes, rarely ever requiring as long as fifteen minutes.

Dr. W. T. Maupin, Fresno: I have generally employed chloroform in my surgical work, but this evening I saw an anesthetic that so far surpasses the others that it should be most carefully investigated. Let Dr. Morton give us a dissertation on subarachnoid injection, explaining in detail the technic and the indication for its employment.

Dr. A. B. Cowan, Fresno: It has for some time been my belief, and I am prepared to defend the view, that where we give whisky in cases of anesthesia where a stimulant is needed, we make a grave mistake. Both are narcotics, and both have much the same effect on the vital organs and centers, and I am thoroughly convinced that in these cases the whisky augments the condition it is intended to relieve.

Dr. A. W. Morton, on being called upon by the president, addressed the society, giving some further views on the subarachnoid injection of cocain, saying: The toxic properties of cocain are not so dangerous as if injected into the skin, for it does not reach the circulation, and it is used so far from the centers, and in so small a dose, not more than half a grain, that the dangers, if any, are reduced to the minimum. In dentistry, where the cocain can reach the circulation where it is in close proximity to the vital centers, as much as two grains are used sometimes. When such symptoms as rapid pulse, nausea, vomiting, and perspiration supervene, it is not cocain poisoning thus manifested, but they are symptoms of shock, and will be observed if you simply draw off some fluid from the subarachnoid space. This space is sensitive, and if you withdraw 30 or 40 minims of the fluid, you change the tension, thus producing the symptoms of shock. If you use normal salt solution as an injection, you will obtain the same symptoms, thus showing that cocain poisoning is not the cause of this train of symptoms. Formerly we were fearful of shock, but are not so much so now. When this method was first employed, it was considered impossible to secure anesthesia above the diaphragm. We took dogs, and in them obtained analgesia over the entire body, and, after sufficient experimentation of this kind, we employed it in human beings, and obtained a like result. One case, in which we employed cocain in this manner, was one of mitral insufficiency, with 5 per cent sugar in the urine, with lack of compensation, who had a lipoma weighing two pounds on his neck. We used 20 minims of a 2 per cent solution of cocain, and removed the growth without pain to the patient. His pulse was running during the operation from 112 to 120. In another case, a diabetic with carcinoma of the tongue, in which we ligated the linguals, removed the parotid glands, and excised the tongue, the operation lasting two hours, the patient did nicely during the operation, suffered no pain, and recovered quickly. In one other case, a large carcinoma of the scapula, there was some shock, but in this case we drew off 40 minims of the fluid. We do not have headache now in these cases, for we do not withdraw any of the fluid. However, if headache should occur, the patient is kept quiet and some of the coal tar products given. Nausea has been observed in about one in six cases while on the table, but is rarely seen after they reach the ward. In all of these cases the patients are allowed to eat as usual, even taking their breakfast before going to the operating room. And in this anesthesia, if the patient were prepared as for ether or chloroform, we would not have nausea. In reply to the query if the addition of the cocain solution will not increase the tension in the subarachnoid space, I will say that it does; but it is quickly absorbed, and the tension soon reaches normal. We have tried the cocain in normal salt solution, but the difference in gravity renders it less satisfactory than a solution in plain water which has been boiled three times.

OBITUARY.

CHARLES EBEN COOPER.

Charles Eben Cooper was born near Sacramento, November 22, 1860. His father, Eben Bruce Cooper, a pioneer, was actively connected with the mining and commercial interests of the early days of California statehood. Removing to San Francisco, while their son was yet a child, he was placed in the public schools of this city, where he remained until after graduation from the Lowell High School. While attending this school, he decided upon the study of medicine, and it was here that one of his teachers wrote in his schoolboy autograph album a sentiment that was the prophetic keynote of his subsequent career, "You will succeed because you are willing to deserve success."

On leaving the high school he occupied clerical positions for several years, and came to be regarded as an expert accountant. During this time all of his leisure hours were devoted to the study of French and German, the reading of medicine, and to attending evening lectures at the College of Pharmacy.

September 26, 1886, he was married to Miss Minnie Sabin, of Alameda, whose intellectual gifts, sympathetic understanding, and willingness to cooperate in all that contributed to his advancement, made possible much of the success which was to crown his brief life. It was his greatest delight through the years which followed to acknowledge the help and the inspiration which his wife, this "best friend," was to him. Soon after marriage he entered Cooper Medical College, remaining three years, graduating in November, 1889.

His idea of "deserving success" was to command it, by as thorough preparation as it was possible for him to make. With this end in view, taking their year-old baby boy in their arms, their French and German books in their hands, this couple, with the dauntless courage that assured success, boarded a ship bound for Europe, and throughout the long voyage pursued the study of these languages so necessary for their work abroad. After nearly two years of post-graduate work in London and Berlin, he returned to San Francisco. From the beginning he felt that surgery was to be his specialty. With well-directed aim, and by constant devotion to his science, he rose surely and steadily, until by common consent he was accorded rank with the first surgeons of this city. After six years of hard work, Doctor and Mrs. Cooper again went to Europe to visit the operating rooms of the world's finest surgeons, and to attend the International Congress of Medicine in Moscow. Returning to San Francisco, he resumed his practice, and labored ceaselessly for three more years, when for the third time he turned aside for a few months of travel and study. Two months were spent in Johns Hopkins Hospital, when Doctor and Mrs. Cooper again went to Europe to attend the International Medical Congress in Paris. They returned from this trip last October with greater vigor and enthusiasm than ever. The care of a large and exacting practice broke his health. Endocarditis ensued, from which he died July 21, 1901, leaving a mother, who survives him, the wife of his inspiration, and a son of thirteen and a daughter of ten years of age.

In the death of Dr. Cooper, San Francisco has lost one of her manliest men, the medical profession one of its most skilful practitioners, and humanity a friend. Acknowledged by the leading surgeons as a peer, beloved by his many patients and friends, this broad-minded, high-souled man left an example of indomitable perseverance and devotion to duty that is seldom seen.